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ABSTRACT

This report on the state level use and application of the 1971-1977 Adult Performance Level (APL) study contains two reports: "Competencies for Adult Basic Education and Diploma Programs: A Summary of Studies and Cross-Reference of Results." by Joan Keller Fischer and "The APL Study: Science, Dissemination, and the Nature of Adult Education," by Walt Haney and Lloyd David. (The APL project involved the identification of competencies required to function in society, the assessment of competency levels among American adults, and the development of curricula and guides for adult competency based education programs.) In her report Joan Fischer compares the APL effort to eleven other efforts to identify adult competencies (some of them based on APL), examines the APL study, and reviews twelve national and state level competency identification efforts (in New Jersey, Pennsylvania, Alaska, Utah, California, and New York). She concludes with a summary of competencies deemed important by the APL and other efforts. In their report Haney and David review the history of the original APL effort, examine the conclusions of five major APL critics, add their own criticism, examine the reasons for the spread of APL to state and local programs, and point to areas for further study. They conclude that the value of APL has been its contribution to broadening the conceptions of how adult basic education can be organized and to enriching the body of curriculum materials on which adult educators can draw. They question, however, the plausibility of searching for any one set of knowledge and skills with which to define overall adult competence in a variegated and pluralistic society. (MN)

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APL REVISITED: ITS USES AND ADAPTATION IN STATES

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FOREWORD

No project in the 15-year history of the Adult Basic Education Program has had more widespread and rapid impact than the Adult Performance Level (APL) study. APL began in 1971 with support from the Adult Education Division of the U.S. Office of Education (USOE). By the time the final report from this study was issued in 1977, two-thirds of the states had already decided to implement some form of competency-based adult education, almost all of them based on the APL findings. Within the next 3 years, seven major state- or national-level studies had refined, expanded, modified, and left relatively intact the APL's identification of the range of competencies for adult life. Curriculum materials originally developed through the project are now available commerically.

The APL project included a series of activities. The first was the identification of competencies required to function in society. The second was an assessment of the levels of competence among the American adult population. The third was the development of curriculum materials and guides for adult competency-based education programs. In addition, the Adult Education Division sponsored national and regional workshops to inform state administrators and practitioners about the APL process and findings.

The two papers in this volume look at the APL from different perspectives. Joan Fischer examines the substance of the APL-identified competencies in relation to 11 other efforts to identify adult competencies—two of which preceded APL. Fischer's paper looks at the first stage of the APL process—the identification of competencies that are proposed as encompassing the performance demands of some segment of adult life. She cautions the reader to understand that the sponsors and directors of this kind of effort are faced with many decisions. How these are made and what these judgments are will profoundly affect the substance of competency identification and the determination of which ones will be proposed as essential to success or survival.

She then reviews 12 competency identification efforts at the national or state level: the original two APL lists of competencies, five that were built directly on APL, and five that were not limited to the APL framework, although they overlap substantially with APL. Two of the latter were actually conducted prior to the APL project. Her descriptions illustrate how these critical judgments were made and the surveys of need conducted.

In the final section of her paper, Fischer presents an extensive Summary of Competencies. Using the APL listing as a baseline, she identifies those that other studies have determined to be important, as well as the degree of variation between the APL's list and the others. For those studies that were not limited to the APL list, the additions are also presented.

The 1978 changes in the Federal Adult Basic Education law place greater emphasis on teaching the eligible population those skills and abilities that are necessary for functioning in adult life. It is likely that many programs will want to identify the lists of competencies that will be integrated into their programs. Our intention in this paper is to illustrate that much of this work has already been done. While variations should be expected, depending on local conditions and student needs, program developers and instructors need no longer start from scratch. The substantial work of these 12 studies offers an extensive resource to competency-based adult education programs.

Walter Haney and Lloyd David look at the phenomenal spread of the APL concept and materials as a central event in the evolution of adult basic education programs. In this context, they also review some major criticisms of APL that illustrate the pitfalls of designing and implementing competency-based education programs.

After reviewing the history of the original APL effort, they scrutinize the conclusions of five major APL critics and add a few of their own. Their analysis emphasizes the impact of these criticisms on judgments about the validity and scientific quality of the study. They are not pleased with what they find. In effect, they and the others question many of the decisions and judgments that Fischer has outlined as critical in the competency identification process.

They then turn to the spread of APL to state and local programs and the development of curriculum materials for Adult Basic Education classes. They conclude that a variety of factors have contributed to this evolution, including USOE's sponsorship of developmental efforts to implement APL-based changes and the perception by adult educators that the APL framework offered a valuable and much needed alternative to traditional adult basic education.

They conclude that the value of APL has been its contribution to broadening the conceptions of how adult basic education can be organized and to enriching the body of curriculum materials on which adult educators can draw. However, they warn against the use of the paper and pencil, multiple- and limited-choice format as a way of assessing "functional competence" and identifying an individual's level of competence. Such procedures, they feel, are too fixed and rigid for these purposes. More fundamentally, they question the plausibility of searching for any one set of knowledge and skills with which to define overall adult competence in a society as variegated and pluralistic as modern America.

Our intention in this paper is not to open the wounds of criticism that have surrounded APL, although this is a danger. APL was a constructive, sincere effort by both research and development and program professionals to make systematic improvements in a system that many perceived was not effective. Working against an established view of the programs and seeking to find ways to guide some fundamental changes, it is not surprising that the results are imperfect and that critics will expose these imperfections to view. Rather, we seek to inform adult educators about the critical issues that are involved in developing competency-based education programs and to examine the process of diffusion and implementation of materials that might bring about constructive changes in a much needed program.

This report is one of several being published under the auspices of NIE's Adult Learning Team, Education in the Home, Community, and Work Unit, Program on Teaching and Learning. A second is *The Adult Illiterate Speaks Out* by Anne Eberle and Sandra Robinson.

The third is *Adult Development and Approaches to Learning*, with contributions by Harry Lasker and James Moore on "Current Studies of Adult Development: Implications for Education," and by Edwin L. Simpson on "Adult Learning Theory: A State of the Art."

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COMPETENCIES FOR ADULT BASIC EDUCATION AND DIPLOMA PROGRAMS: A SUMMARY OF STUDIES AND CROSS-REFERENCE OF RESULTS

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COMPETENCIES FOR ADULT BASIC EDUCATION AND DIPLOMA PROGRAMS: A SUMMARY OF STUDIES AND CROSS-REFERENCE OF RESULTS

In February 1978, the U.S. Office of Education sponsored an invitational workshop on adult competency education. A summary of the research and activities relevant to competency-based adult education was presented and later published (Fischer, 1978). A second paper briefly reviewed additional efforts for a National Invitational Workshop on Competency-Based Adult Education (Fischer, 1979). In both cases, a number of the surveys and studies were still in progress, and final results not yet available. This current paper is based on the completed projects. Its purpose is to update and analyze in greater detail these efforts to identify competencies necessary for adult functioning and to summarize competencies from the various studies.

1. Identification of Competencies

In the last few years, studies of the necessary competencies for adults have concentrated on those related to functioning successfully outside of school—a reaction to the emphasis on basic reading, math, and grammar skills within our Adult Basic Education and high school equivalency programs and an attempt to alter at least the context of that instruction, if not the entire curriculum.

Identifying competencies necessary for successfully carrying out adult responsibilities is a complex process involving a series of decisions. Either directly or indirectly, the program developers make decisions regarding:

- What are the competencies?
- What level or standard of performance indicates competence?
- Which competencies are truly necessary?
- On what criteria should decisions of necessity be based?
- How should competencies be stated?

If the procedure selected involves surveying people, additional decisions include:

- Who should be surveyed?
- Should the survey be of a questionnaire type or an assessment instrument?
- How are the competencies transposed into questionnaire or assessment items?
- If a questionnaire is used, what is the best way of phrasing the question to the respondents so that the response is valid?

Throughout the process of competency identification, judgments are made that reflect the influence of such factors as the individual or organization that is conducting the study, the funding agency, the amount of money available, and the availability of desired information. Invariably, subjective judgments enter into and affect the final results. These are most obvious in a comparison of the competency domains and the items of the questionnaire or assessment instrument. These decisions are open to criticism by those who disagree with them or see weaknesses in their implementation. In reviewing these studies or any others, the reader should keep in mind the purposes, perspectives, and procedures used in order to understand accurately the results and the comparison of the various efforts.

One of the earliest, and probably the most visible, effort to identify adult functional competencies was the Adult Performance Level (APL) project funded by USOE and conducted by the Texas Education Agency and the University of Texas. This project became a point of departure for many others who have sought to replicate or expand on the APL lists.

Reactions to the APL listing varied. While some adult educators readily accepted the listing, others questioned the procedures (Griffith and Cervero, 1976) and asserted that the statements and items were value laden and/or limited. These reactions are reflected in the approaches taken in later studies. In some cases, other researchers sought to determine which of the APL objectives ABE students most needed. Other studies sought to go beyond or expand the APL listing. The APL work, however, is still a primary influence on other research, whether or not the premise and results are accepted.

This review of competency identification studies focuses on: (1) studies that were limited to reactions to the APL listing; and (2) studies that were not limited to APL. The reviews of both types of studies emphasize the procedures used to identify competencies. In both cases, only studies that produced listings of competencies based on substantial representations of subjects have been included; studies that are limited to one program or community have not been included.

2. The APL Study

Although the APL work has been reviewed extensively in other articles, its importance as a major effort in studies to determine competencies merits its inclusion in this review. The APL research was initiated by USOE to stimulate development of curriculum specifically designed for adults. The project had three objectives:

- To determine the basic requirements of adult living.
- To determine the basic performance criteria associated with these requirements.

- To develop, field test, and administer an instrument that would identify levels of competency.

The first objective was accomplished by: (1) reviewing behavioral and social research to categorize the needs of undereducated and underemployed adults; (2) surveying state and Federal agencies and foundations to identify characteristics that distinguished successful from unsuccessful adults; (3) conducting a series of regional conferences on adult needs to which adult educators, representatives from the private sector, and persons from state and Federal agencies were invited; and (4) interviewing undereducated and underemployed adults. The project staff arrived at the concept of functional literacy that included the five knowledge and four basic skills areas identified on figure 1. The range of skills included led the researchers to drop the term "functional literacy" in favor of "functional competency" (Adult Performance Level Project Staff, August 1977).

FIGURE 1

THE APL MATRIX

KNOWLEDGE AREAS / SKILLS	CONSUMER ECONOMICS	COMMUNITY RESOURCES	GOVERNMENT AND LAW	HEALTH	OCCUPATIONAL KNOWLEDGE
COMMUNICATION SKILLS					
COMPUTATION					
PROBLEM SOLVING					
INTERPERSONAL RELATIONS					

- Several concepts are integral to the APL definition of functional competency:
  - Functional competency is meaningful only in a specific context. Recognizing the differences among various subpopulations, the researchers chose to "create a single indicator" that was common to most people in the United States.
  - Functional competency entails the application of skills to the five general knowledge areas and is a function of individual skills and social requirements.
  - Functional competency is directly related quantitatively to success in adult life. This assumption led the researchers to adopt an index of success that was a composite of income, level of education, and occupational status.

Though the lack of full documentation of the background research leading to the lists of competencies and the use of the selected success indicators have been criticized, the APL list of competencies and the survey have provided a basis for modifying ABE curriculum and procedures. Several lists of competencies have been issued by the project. The most widely distributed and quoted are the 65 general APL objectives. The more recent listing of 41, which is the basis for the teaching modules developed by the APL staff, grew from curriculum writing efforts rather than from additional research. In compiling the latter, the staff tried to eliminate some of the duplication across objectives (APL Project Staff, 1976; November 1977).

The format for stating the APL competencies consists of a general goal statement, intermediate objectives, and enabling or task objectives. These levels of objectives have been designated unit objective, end behaviors, and learning steps. Theoretically, if an individual can perform each of the learning steps, that person has mastered the unit objective and is competent in that area. Each objective involves tasks for using reading and other communication skills, computation, interpersonal relations, and problem-solving skills.

Some APL competency statements are more specific than others: for example, "to be aware of advertising techniques" *vs.* "to be able to count and convert coins and currency"; "to be aware of various aspects of self and to use this to promote personal growth and effective interpersonal coping" *vs.* "to prepare for job applications and interviews." This variation in the phrasing of competencies is not unique to APL. It reflects the difficulty of stating various competencies, some of which may be relatively straightforward while others are more abstract. The degree of specificity of competency statements affects the determination of standards for demonstrating possession of those competencies. Standards and component behaviors for less concrete competencies are subject to greater variation and value interpretations.

3. APL-Based Validation Studies

Studies designed primarily to determine the appropriateness of the APL list of competencies to ABE populations were conducted in New Jersey (two efforts), USOE Region X, Pennsylvania, and Alaska. These studies primarily assessed student need or interest in response to statements drawn from the APL list of major or enabling objectives. Frequently, only some of the APL statements were used, and these were paraphrased from the original APL statements.

New Jersey Adult Basic Education Study

To determine the appropriateness of the APL objectives for New Jersey native born and English as a Second Language (ESL) ABE students, two studies were conducted. Flaherty (1977) interviewed English-speaking ABE students to determine their self-perceived needs and interests. Forty-two statements were selected to reflect the five APL knowledge areas. Although the process for selecting the particular statements used was not described, emphasis was placed on statements that would be brief and understandable by ABE students.

Generally, many of the competency statements included in this study could be viewed as subcomponents of the APL unit objectives rather than as a reflection of the total scope of objectives. For example, "Filling Out an Income Tax Form" and "How the Court System Works" (the APL statements) are not synonymous with "To Understand the Concept of

Income Tax" and "To Understand the Court Systems and How to Use the Legal System in Order to Protect Your Rights and Possessions" (the terms used by the survey).

A preliminary interview schedule was field tested and revised to construct the final 27-page questionnaire. For each statement, the respondents were asked: "Do you want to learn this skill in your ABE class this year?" "How much do you already know about that skill?" "Do you think it's necessary, helpful or just interesting for you to learn?" One competency for each of the five knowledge areas was probed in greater depth. The interview also included open-ended questions to ascertain additional skills desired and the priority of these desired skills.

The survey population included only students participating in ABE basic skills instruction. Twenty programs were randomly selected to represent programs of different size. Ten students present at the time of the scheduled site visit were interviewed. The final sample of 204 proved to be generally representative of the total ABE population, particularly of those in the Atlantic shore area. Based on the results of the APL test instrument, these respondents had a below average mean score. The instrument used was the American College Testing Program's revision of the original APL test.

Student responses for interest in learning and necessity of learning a competency were related. However, in all instances, a greater percentage of respondents were *interested* in learning a competency than felt it *necessary* to learn it. Though over 50 percent showed an *interest* in learning skills associated with occupational knowledge, government and law, consumer economics, and health, the percentages who felt it *necessary* to learn those areas were 40 percent, 38 percent, 37 percent, and 28 percent, respectively. Ratings of respondents differed noticeably when race, urbanism, reading ability, age, and chief wage earner's income were considered.

In spite of the positive interest in learning APL areas, when asked why they enrolled in the program only 5.4 percent stated a reason related to life-coping skills. Students expressed greater direct interest in instruction related to the basic skills and specific vocational skills than in general APL topics. Flaherty thus concluded that although New Jersey students were interested in learning competencies, basic skills were a higher priority. The difficulty with this finding, which is not uncommon in competency-based research, is that no one is sure that the respondents distinguish between basic skills (reading, writing, oral communication) and basic competencies (the application of these skills and appropriate knowledge to situations they face in their lives).

New Jersey English As a Second Language Study

A second study was conducted in New Jersey to ascertain APL topics of greatest interest and importance to ESL students in ABE programs in the northern part of the State (Bodman and Lanzano, 1978). The intent of the study was to help teachers select meaningful contexts for ESL instruction. To keep the questionnaire to a reasonable length, only two APL content areas—occupational knowlege and consumer economics—were included. A 66-item ESL questionnaire was translated into 18 different languages to ensure that it would be understood by students of the different language backgrounds in the area.

Students were asked to respond to each of the 66 topics by rating their interest in and the importance of each. For both interest and importance, students had six options that included "no opinion," "don't understand," and "know enough." A "free response" section allowed students to indicate additional topics of interest or importance to them, what they found most difficult to learn when they first arrived in the United States, and what activities were the most different for them in this country.

The majority of the responses (359 out of 453) were from Spanish-speaking students. An additional 57 were Japanese, and 37 were Polish speakers. Although demographic data were collected, there was no indication of how representative the respondents were either of all New Jersey ESL students or of those from the counties surveyed.

Responses were analyzed according to these three language groups. As with other surveys of this type, ratings of interest and importance were highly correlated. In all three groups, ESL students were enthusiastic about learning topics included in the APL study. Spanish-speaking students were most receptive to the APL topics, while Japanese and Polish students were less responsive. Different groups were also interested in learning different topics. Spanish-speakers were most interested in occupational knowledge topics, while Japanese respondents ranked five consumer economics items as of greatest interest to them. There were also many variations for individual items and among Spanish nationality groups.

Since Spanish-speaking students comprised the largest group of respondents, the items of greatest interest/importance to these students were identified. Four indicators were used:

- Fifty percent or more respondents judged the topic very interesting.
- Fifty percent or more judged the topic very important.
- The mean interest rating was 2.5 or higher (scale of 1 to 3).
- The mean importance rating was 2.5 or higher.

The 23 topics listed in table 1 met one or more of the above criteria.

Spanish and Japanese student responses to "free response" items were categorized and are listed in order of frequency for each category in table 2. The most frequently noted free response topics relate to learning the English language and the new culture. Other frequently mentioned items repeated some of the APL topics (e.g., employment, health care, food, and transportation). Some of these, however, were not included on the survey, which dealt only with occupational knowledge and consumer economics. Free response items apparently tended to relate to specific and immediate student concerns (e.g., "talk to mechanic about problems with car").

The frequency of life-coping skills topics, along with the English-language and cultural topics, could realistically be interpreted to support ESL students' interest in learning both life-coping skills and English. Many of the survey items were related to topics (information), while about 15 others involved very specific language behaviors (e.g., "speaking in a job interview"). Life-skills topics can provide ESL teachers a basis for designing instructional content, providing wanted information, and/or teaching English language skills.

TABLE 1
NEW JERSEY ESL TOP TWENTY-THREE TOPICS FOR SPANISH-SPEAKING STUDENTS

- Discuss what kind of job is best for you.
- Learn how to take employment tests.
- Learn how to speak in a job interview.
- Learn about deductions from a job paycheck.
- Discuss job benefits: vacation time.
- Discuss job benefits: sick leave.
- Discuss job benefits: medical insurance.
- Discuss job benefits: social security.
- Discuss job benefits: pensions.
- Discuss job benefits: unemployment insurance.
- Learn about job qualifications.
- Discuss job benefits: labor unions.
- Discuss job problems: lay offs.
- Learn how to read advertisements to tell legitimate offers from suspicious offers.
- Discuss how to look for a job.
- Discuss how to apply for a job.
- Discuss job benefits: life insurance.
- The good and bad of charge accounts.
- Discuss warranties and how to use them.
- Fill out application forms.
- Reading leases.
- Learn how to get a loan for a car.
- Learn how to use a bank.

TABLE 2

NEW JERSEY ESL FREE RESPONSE ITEMS

English
English
conversation
comprehension of T.V., movies
reading and writing
letters
composition
telephone
English for daily use

Culture
customs
way of life
ambiance
everything
many things
people
pace of life
youth
people's character
freedom
behavior
American mentality
social system
human relations
family life
fear
lack of communication among neighbors
holidays
racism
authority
respect for humanity
no servants
social relations of children

Climate
climate

Employment
work
day of work
employment opportunities
start a business
become a secretary
become a commercial artist
become a teller
become a nurse
become a factory worker
join the army

Employment (continued)
learn a trade
looking for work
reading newspaper ads for jobs
job benefits
social security
choosing a career
knowing about employment possibilities
applying for a job
filling out job applications
work hours
labor laws

Transportation
finding my way
getting from place to place
following directions
public transportation
local streets
cars
talk to mechanic about problems with car
driver's license

Food
food
restaurants

Shopping
shopping
English in food and clothing stores
knowing quality of product
shopping for food
exchanging items
knowing correct prices

Finances
money
income tax
banking
economic system
high cost of living
welfare
credit
money order

Academic Subjects
current events
history

Academic Subjects (continued)
politics
art
religion
architecture
international relations
literature
music
problems affecting humanity
science

U.S. Government and Law
U. S. laws
getting a resident visa
citizenship exam

Miscellaneous
emergencies
calling police or firemen
car accidents
the city
big cars
wide streets
pollution
recreation
insurance
utilities
travel agencies

Children
adolescents
psychology of adolescents
how to deal with adolescents
school for children
talking with children's teachers

System of Education
system of education
enrolling in college
financial aid for college

Housing
housing
appearance of housing
decorating an apartment

Clothing
style of clothing

USOE Region X Study

The User Needs Assessment conducted in USOE Region X by the Northwest Regional Educational Laboratory (NWREL) included only statements related to consumer economics and was designed to provide a basis for developing curricular materials (Pickens and Sellers, 1977). ABE students in Idaho, Washington, Oregon, and Alaska were included in the survey. To design an instrument appropriate for ABE students, each APL consumer economics objective was rewritten to a fifth grade or lower reading level. Respondents were asked if they felt it was "not important," "kind of important," or "very important" for materials to be developed in each of the 20 areas.

Survey sites were selected to represent the proportion of ABE students in each state, rural/urban location, ethnic group, income level, age, and sex. Each site received 20 surveys, 19 to be completed by students and 1 by an instructor. Of the 460 surveys distributed, responses were received for 382.

The percentages of students ranking an objective as "very important" varied somewhat from state to state and for those in different sex, ethnic, age, and income groups. The manner of asking students to rank importance may have influenced student responses. Students were asked how important it is to develop *materials* dealing with each area. They may actually have ranked a statement as "not important" if their program already had materials related to that topic.

As with other studies, the survey statements varied somewhat from the original APL statement. This variation in some cases resulted in a narrower presentation of the competency (e.g., "How to Count and Change Money" and "How to Use Math in Handling Money" for "To be Able to Count and Convert Coins and Currency, and to Convert Weights and Measures Using Measurement Tables and Mathematical Operations").

Pennsylvania Assessment Project

A statewide APL validation survey was conducted in Pennsylvania as part of an ABE Assessment Project (Lindsay and Nead, 1977). The primary purpose of the survey was to determine how receptive the participants in ABE programs would be to APL instructional topics. The 1,580 student and 277 staff respondents were associated with 60 programs in the State and represented beginning, intermediate, and advanced levels of ABE instruction.

Four general behavior statements that illustrated the reading, writing, computation, and problem solving tasks represented in each APL knowledge area were developed. Students were asked:

- Could they "do tasks like this now?"
- If an adult education course could teach them "to do this sort of task well," would they take such a course?

Teachers were asked:

- Did they teach this type of competency specifically?
- If they did not teach it specifically, did they provide training in the skill involved?
- How important did they consider this type of competency?

Additional information on the rating of competencies was gathered during a followup workshop.

Since the study was intended to determine receptivity to APL topics, the statements to which respondents reacted were composites of selected tasks. For example, the consumer economics reading item was stated as follows:

> Being able to read catalogs, consumer guides, advertisements, and similar material, in order to select goods and services that you need daily.

The presentation of life-skills topics also emphasized individual basic skills rather than the integration of basic skills to perform an adult life task. Thus, respondents did not react directly to statements correlated to an APL objective or task.

The researchers also collected test data using the original Texas version of the APL survey. Because that version of the survey required more time to administer, four parallel tests of equal difficulty were compiled. Using a simultaneous person-item sampling technique, the tests were administered to students at three instructional levels.

When categorized according to students' instructional levels and teachers' and workshop participants' rankings, the responses to the survey varied. There was, however, general agreement that occupational knowledge was of greatest importance, with consumer economics next.

Scores on the APL survey indicated that over half of the students fell into the lowest APL category (APL 1), and that the APL survey scores were related to instructional placement in program. Moreover, the perceived ability to do the tasks included on the questionnaire and willingness to take part in instruction related to those tasks was a direct reflection of instructional level. That is, more students at the first to fourth grade level fell into the APL 1 range; they felt they could not complete the tasks, and were willing to participate in instruction to learn how. Interestingly though, there appeared to be little relationship between student self-assessment of ability and actual performance on related test items.

In spite of the positive response to desire for instruction for reading, writing, computing, and problem solving using life-related materials, counselors, supervisors, and students all ranked "Preparing for the High School Equivalency Exam" and "Increased Self-Confidence" as higher priorities than coping with life roles and problems.

Alaska Validation Survey

The Alaska APL Validation Survey (Alaska Center for Staff Development, 1978; Alaska Commission on Post Secondary Eduction, 1977) was intended to determine the degree of congruence between areas in which adults were found to be deficient on the national level and the perception among Alaskans in Basic Education Programs as to the relevance of these areas. In addition to ascertaining the perceived needs of students across the State, the instrument was designed to assist local programs in identifying specific needs/interests of students within those programs.

To compile the survey, the list of 65 APL objectives was used as a basis for 81 items across all five APL knowledge areas. Each item began with the words: "I want to learn...." Students checked: "Yes," "I think so," "I don't know," "I don't think so," or "No." A priority rating of 1 to 5 was obtained and mean preference scores were calculated.

The survey was administered to 392 ABE students and nonstudents between January and May 1978. The nonstudents included teachers, administrators, or other professionals employed in ABE programs. Data were analyzed according to the following categories: rural students, urban students, nonstudents, region, employment status, and income. The priority ratings listed in the Summary of Competencies (section 6 of this paper) were those for all students surveyed.

A review of items indicated that several were phrased to be more specific to Alaska (e.g., "How to Store Food, Like Canning or Freezing"). Most, however, were statements that reflected portions of APL objectives. In fact, a few could have related to several objectives (e.g., "I Want to Learn About Buying Food"). The priority rankings of items and APL categories varied noticeably among people included in the categories above. Often, one item would fall among the top 10 for one group, but not be similarly ranked for any other group. Preference for general APL knowledge areas, ranked across all groups, was as follows: (1)consumer economics; (2) health; (3) government and law; (4) community resources; (5) occupational knowledge.

4. Competency Identification Studies Not Limited to APL

Utah Consumer Competencies Study

A somewhat unique approach was used by the Consumer Research Center to identify specific consumer competencies needed by Utahans (Alfaro and Gillpatrick, 1978). Beginning with the proposition that Utah's cultural and economic situations are unique, the researchers also recognized the effect that life-cycle position might have on consumer competency needs.

To prepare a preliminary list of consumer needs, the researchers used information from: (1) a literature review, through which consumer education topics were identified; (2) an expenditure profile, based on Bureau of Labor Statistics data, of adult consumers according to life-style stages; (3) a list of prominent consumer frauds in Utah; and (4) a subjective knowledge of the demographic and cultural make-up of the State.

The list of consumer needs was then ranked according to the following criteria: indicated economic importance to Utahans; incidence of consumer fraud complaints; and judged potential for improving the well-being of Utah consumers through education. The list was also ranked for people in the following circumstances: bachelor state; young married; full nest I; full nest II; full nest III; empty nest I; empty nest II; single parent with children. Competency topic areas included housing, transportation, home management, and finances.

The priority of topics and the specific tasks associated with each varied according to the life stage. For example, the top priority for young marrieds was transportation; for empty nest

II, it was health. Although financial planning was third in priority for both groups, young marrieds emphasized budgeting, credit-banking, and financial records, while Social Security, wills, trusts, and estates were more important for empty nest II adults. The list of consumer needs identified through these rankings provided the basis for developing specific behavioral objectives—i.e., the values, knowledge, and skills deemed necessary to make an economically rational expenditure.

The Utah listing included items from the APL areas of community resources, occupational knowledge, and health. In addition, many of the specific competencies could be considered to be above the level of minimal coping (e.g., wills and estate planning, music lessons/instruments).

To aid in the development of curriculum, project staff recommended that instruction be modularized. Core topics would provide a common instructional experience. Modules would augment the core instruction and deal with the immediate competencies associated with each core topic for the various life situations. This system was intended to provide flexibility and appropriate instruction for adults.

The use of Bureau of Labor Statistics data to develop spending habit profiles for eight lifestyle stages suggests a relevant consideration for competency identification studies. Although only national statistics were available, the findings were modified to suit Utah's demographic and cultural situation. The lack of available objective data specific to Utah required substantial reliance on subjective judgment for this modification. It should be noted that this research design did not include collecting questionnaire or assessment data from Utahans.

The Utah study represented a different approach to identifying competencies—one that attempts to deal with the reality of adult life and adult learning. Invariably, needs assessments have found that the interest and perceived needs of students vary according to sex, age, ethnic group, income, and other factors. In addition, a prevalent observation among adult educators is that instruction must appear relevant to individual learners. The concept of identifying variations in emphasis of particular competency topics for groups and individuals is important for program developers in that it allows for variation in competencies acquired and tasks undertaken while maintaining some consistency in curriculum competencies.

Adkins-Connecticut Reconnaissance Survey Method

As the first step in designing a Life-Skills Educational Program, Winthrop Adkins proposed an approach for identifying specific social and psychological problems of living (Adkins, 1977). The procedure, called the Reconnaissance Survey Method, stresses the collection of qualitative data through counseling-interview techniques. The information collected is then analyzed to identify clusters of problems and to organize specific problem data within each cluster. Collection and refinement of problem statements are carried out over a series of interviews with several groups. Generally, the approach is similar to grounded theory or qualitative research procedures.

The Reconnaissance Survey procedure was used in the Valley Regional ABE program area of Connecticut. This program served five towns in the State and was considered to be representative of the State's industrial regions. Interviews were conducted with 258 people

from nine groups (e.g., blacks, ex-offenders, welfare mothers) considered to be in greatest need of ABE instruction, as well as with ABE program staff members and personnel from other community programs.

The statements appeared to cluster into seven categories:

- Occupational and Career Problems.
- Problems in Living in Community.
- Problems of Personal Growth and Development.
- Problems in Relating to Others.
- Medical and Health Problems.
- Marriage and Family Problems.
- Problems of Being a Parent.

For each major category there was a list of subcategories, each with supportive problem statements. The population(s) from which the problem statements derived were indicated in the listing. (To compile the Summary of Competencies for this study, only the problem statements pertaining to all nine groups interviewed were considered.)

The findings from the Adkins-Connecticut survey were not presented as competency statements. However, the procedure for problem identification demonstrated an alternative or additional step that researchers could employ in determining necessary competencies. The Summary of Competencies tables examine the extent to which the specific elements of the problem statements relate to competencies included in APL and other lists. Problems that did not relate to specific competency statements could prove useful in refining or expanding such lists.

Adkins' perspective toward life skills must also be noted, as this perspective affected the findings and problem statements. In this life-skills approach, social and psychological problems rather than literacy skills and knowledge are emphasized. Learning activities dealing with the problems are supposed to evolve through a problem-solving process rather than consist of a fixed, predetermined set of tasks.

An examination of the problem statements indicates that—in spite of the difference in procedures for identifying needs, Atkins' perspective on the nature of those needs, and the phrasing of statements—many either directly refer or relate to basic skills and knowledge. Many statements indicate a recognition of lack of basic skills and vocational training, while others, such as "Knowing Your Rights on the Job," indicate an information need. Other problem statements relate to such items as limited perceptions of possible choices (e.g., "Not Seeing Geographic Mobility as an Option"), dealing with people and conflicts (e.g., "Resolving Conflicts with Co-workers"), or emotional/value/attitudinal perspectives. Still others relate to social conditions (e.g., "Problems Which Prevent Certain Groups from Enrolling in Educational or Training Programs") or to a low income (e.g., "No Money to Hire a Baby-sitter").

In comparing the Connecticut problem statements with the APL objectives, it appears that the content of many of the problem statements directly corresponds to APL general and enabling objectives. The problem statements derived from Adkins' research, however, emphasize

the fact that, although individuals can increase their competencies by acquiring information and skills, there is also an external, societal factor involved in success. This factor places an added burden on disadvantaged adults and may, in fact, produce barriers that cannot be overcome through education.

California ABE Needs Analysis

The California Division of Adult and Continuing Education contracted with NOMOS Institute (June 30, 1977; December 1977) to conduct a Statewide analysis of public needs for Adult Basic Education. The intent was to identify all necessary competencies that are functional to economic and educational success in today's demanding, complex society. The proposed procedures for identifying these competencies involved, first, a systematic search of existing information from which a universal list of competencies could be developed. The APL list was one source; the researchers also used such other sources as public agencies, a literature search, statistical data from public records, and interviews with educators, legislators, agency staffs, and others. The final selection of a set of competencies was then determined by an appointed panel of adult educators.

NOMOS was also to determine the standards for the competencies, methods for determining possession of competency, a sampling plan, and the competency levels of California adults. Although the researchers drew on the APL listing, information from interviews with 50 agency representatives indicated that previous work had not accurately identified many of the competencies. The plan was interesting for its proposed use of multiple sources to identify competencies and the variety of "found" data, such as tax returns, that were to be used to determine performance indicators and criteria.

The project report indicates that the list of specific competencies evolved from: a literature review; a listing of generalized competencies; the composition of an organizational framework; specific statements generated by an expert panel; and extensive review, rewriting, and editing (NOMOS, May 1978). The proposed procedures are worth considering because they represent a theoretical perspective regarding procedures that should be followed. That such procedures were not implemented as planned demonstrated the practical realities of doing research to identify competencies, especially when available time is limited.

Five major competency categories were determined:

- *Cultural Competencies*—related to beliefs, attitudes, traditions, and behaviors strongly held by society and including such things as art expression and appreciation; custom, ceremonies, and traditions; communication, recreation, and leisure; religion, morality, and values; and philosophy, science, and history.
- *Economic Competencies*—related to acquiring and managing goods and services and including such activities as banking, budgeting, consumerism, and employment.
- *Health and Safety Competencies*—including such areas as first aid, health hazards, nutrition, and health literacy.
- *Interpersonal Competencies*—including such competencies as verbal communications, self-awareness, and handling stress that enable a person to live with and among others.

- *Socio-political Competencies*—including citizenship, sources of information, legal processes, political processes, public resources and transportation.

The five categories contained subcategories and specific statements for each subcategory. These specific statements represented the competencies.

The resultant list contained some competencies that many might not consider necessary for successful survival (e.g., "Recognize Major Forms of Dance" and "Engage in Creative Pursuits"). The criterion for necessity is one that must be very clearly stated and that deserves greater attention by those conducting competency identification studies.

In discussing definitions of competency, Heath (1978) addressed these conceptual considerations. He asserts that: "A competency at a particular level of performance is functional when it serves to meet a need of a person with particular characteristics...in a particular set of circumstances." Functional competency is viewed as a means toward individual liberation through enabling a person to meet a self-perceived need. Heath further points out that although a person may not have a particular competency, as indicated by performance on some test, this does not establish that the individual needs to develop that competency. Further, to identify the need for educational treatment, the client must be aware of the competency deficit, must come to perceive the deficit as undesirable, and must think it possible to move toward reducing that deficit.

A Statewide survey of adult competency in California utilizing the 130 performance indicators developed by NOMOS was recently conducted. The respondent sampling was based on selected geographic region, ethnicity, age, and gender stratification variables. In addition, certain census variables were used to describe the sample, including employment status, occupational level, highest grade of school attended, marital status, place of parent's birth, and language spoken at home when the adult was a child. The criteria for analyzing the responses or performance levels for each survey question were thought of as: Level One = a correct response; Level Two = an incorrect response; and Level Three = a nonscorable response.

On the 130 performance indicators used, the total sample achieved a 75 percent overall "competent" (Level One) performance level. Women performed slightly better than men on these indicators, and this difference was consistent in magnitude across all other categories except the economic category, in which men and women performed at nearly identical levels. The age group between 30 and 60 years, on the average, displayed higher competency scores than both the groups between 15 and 30 years and those over 60 years. Ethnic minorities scored consistently lower than the white majority. Comparing performance in 10 of the State statistical areas showed that the urban centers have heavy concentrations of populations with competency performance deficits.

When the sample was categorized by employment status, those not working evidenced a performance level considerably lower than those employed either parttime or fulltime. Similarly, those who had completed more formal education scored better on the survey.

Among the marital status groups, those who were widowed appear to have the largest performance deficits. Adults whose parents were born outside the United States and those

raised in homes where language other than English was spoken also scored poorly on the performance indicators.

In summary, the major demographic groups with the most severe performance deficits were (rank order not implied): young adults and the elderly; minorities; urban residents; those not employed; those with little formal education; the widowed; immigrants and those with immigrant parents; and those with non-English language home backgrounds.

The analysis of survey data also focused on the five categories of competencies:

- *Cultural Competencies*. Performance on these indicators seemed particularly related to minority status and formal education. Linguistic minorities seemed to have particular difficulties in finding adequate recreational resources.
- *Economic Competencies*. Performance levels were lowest among the young (under 20), the elderly, the unemployed, and those with non-English speaking home backgrounds.
- *Health and Safety Competencies*. This category included performance levels that were higher than any of the other categories (nearly 80 percent correct). Adults whose parents were not born in the United States and those who grew up in homes in which a language other than English was spoken had somewhat lower scores than the average of the total sample. In general, the three most difficult topics were first aid, birth control methods, and fire emergencies.
- *Interpersonal Competencies*. In general, this category was more difficult for men, those with little education, the elderly, and those whose parents were not born in the United States.
- *Socio-political Competencies*. Ethnic minorities, those at low occupational levels, and those with non-English speaking home backgrounds had the largest performance deficits.

New York External High School Diploma Program Competencies

The External High School Diploma Program for Adults in New York State bases the award of a diploma on demonstration of generalized and individualized competencies. It is not an instructional program, but concentrates on the identification and assessment of competencies. The generalized competencies are those considered to be prerequisite to further learning.

When the program was being developed, studies identifying competencies (e.g., the APL study) were not available. As a starting point, the project design group identified seven general areas: Communication, Computation, Self-Awareness, Social Awareness, Consumer Awareness, Scientific Awareness, and Occupational Preparedness (Bailey et al., 1973). Competencies in each of these areas were identified with the assistance of a task force of 14 persons having a knowledge of secondary school curricula, prior professional experience with adult learners, broad life experience, and ability and prior experience in writing behavioral objectives.

The program developers, working in small groups, identified and agreed on 64 competencies in response to the question, "What skills do adults need to cope with daily living?" Representatives from small business, industry, unions, schools, and social agencies reacted to

the list, which was then refined, and the regional committee for the diploma program reviewed and critiqued the list prior to the final approval (Nickse, 1977).

Two assumptions guided the task force:

- That the application of learning is holistic; skills such as reading and math were therefore to be demonstrated in context.
- That competencies and the performances by which they are tested must be related to the common developmental tasks of adulthood.

Program staff clearly recognized that the choices of competencies and the selection of skills to be assessed involved value judgments and were somewhat arbitrary. Nevertheless, the similarity between the content of the New York list and that of other listings is remarkable.

The list of generalized life skills minimum competencies, however, should be considered within the context of the entire program design, which assesses the possession of the competencies through five tasks: (1) a series of exercises related to community awareness; (2) an interview concerning personal and family health; (3) a series of exercises related to occupational preparedness; (4) an interview in which personal and social awareness issues are addressed; and (5) the application of problem solving skills to consumer purchases. Once candidates have satisfied the generalized competency requirement they must also demonstrate competency in occupational/vocational and advanced academic or specialized skills (music, art, community service) to qualify for the diploma.

The process of identifying and assessing competencies in each area involves many individuals in the community. For example, in the occupational and vocational area, experts from the community identify the competencies to be demonstrated. The process includes identification of the candidate's job skills; a review of the *Dictionary of Occupational Titles* specific job skills by the program assessor; identification of the community "expert"; establishment of standards and competencies by the expert; administration of the performance assessment by the expert, in conjunction with the assessor; and review by all experts of competencies identified and performance levels expected. The process thus emphasizes the identification of job skills competencies that include local standards for performance. To date, over 90 checklists of competencies have been developed through this procedure.

Since the selection of area and particular competencies within each area are individualized, the cross-reference competency summary in section 6 of this paper considers only those included in the generalized life skills areas. The stress on the five tasks listed above has also been taken into account.

National Center for Research in Vocational Education Project

The Occupational Adaptability Research Program at Ohio State University's National Center for Research in Vocational Education (NCRVE) has recently completed an investigation of competencies and literacy needs for occupational adaptability and transferable skills (Selz, 1980). The concept of transferability presented considers the basic academic skills as underlying components of functional competency and stresses the ability to transfer skills and knowledge previously learned to a new situation. Occupational success—not just securing but keeping a job, changing and advancing, and feeling satisfaction—was seen as contingent on

possessing the ability to transfer. Within this framework, the project staff sought to collect information that would be useful to practitioners and legislators concerned with competency-based education or minimal competency testing.

A master list of functional competencies related to occupational adaptability was compiled from those included in other major research and testing efforts. These tasks were ranked according to priority by experts in adult competency-based education and personnel representatives from business. Competencies were defined in terms of specific basic skills. A survey consisting of 39 statements phrased in everyday language was then developed and field tested to eliminate ambiguity.

People surveyed responded to the following questions:

- Where should a person be taught this (home, school, or on the job)?
- Where do most people actually learn this (home, school, or on the job)?
- If a person did not have this ability, how well would he/she do at work (do well, have some difficulty, or have a great deal of difficulty)?

It is this last question that was designed to determine the importance of the competency.

Four groups were surveyed: the general adult population, high school students, teachers, and employers. A representative sample of 2,083 English-speaking adults 18 years and older were interviewed on a door-to-door basis. To obtain responses from teachers and high school students, 106 public school systems in the contiguous United States were systematically selected and asked to participate; 37 agreed. Although the design called for a sample of 1,500 teachers, only 978 responded. A total of 1,566 high school seniors, selected from the same school systems as the teachers, also responded to the survey. Employers were selected to represent type of industry, size of company, and geographic region. Of the 200 surveys mailed, 107 were returned.

Opinions regarding where skills should be taught did not vary greatly among the four response groups. There was also high agreement between where an ability should be taught and where it was actually learned. However, many competencies thought to be the responsibility of the school were actually learned at home or on the job. With respect to judging the importance of an ability, the responses were consistent across the groups. Respondents thought people would have some problems if they did not have the abilities listed. On the basis of mean responses of the general adult population, the competencies were ranked by importance for doing well at work. The 10 most important competencies, in rank order, were:

- Use reading, writing, and math skills called for by a job.
- Use tools and equipment called for by a job.
- Deal with pressures to get the job done.
- Get along with others.
- Follow rules and policies.
- Do parts of the job that one may not want to do.
- Have a good work attitude.

- Follow job safety and health rules.
- Hold a job that matches one's interests and abilities.
- Get a job for which one has the training and background.

Though the correlation across groups in the ranking of important abilities was high, the employer group was more emphatic than the other groups on the need for many of the abilities.

For the purposes of the Summary of Competencies, the general population response rate is listed. It must be noted, though, that since no competency was perceived as unimportant, all 39 could be considered relevant and important to developing occupational competency.

A second survey was conducted to determine the consumer economics competencies needed to get along in life. Similar procedures were used to arrive at a 40-item consumer economics survey. Again, respondents were asked: "Where should you be taught this ability?" and "Where did you actually learn this ability?" Importance was assessed by asking: "If you did not know how to do this, how well would you get along in life?" Response options were: "Get along very well," "Have some problems," and "Have a great deal of difficulty." A separate national probability sample of 2,054 persons was selected using a procedure similar to that used for the occupational adaptability general population survey. (For the Summary of Competencies, the percentage that indicated "great difficulty" in response to the question of importance was recorded.) The 10 competencies deemed most important, in rank order, were:

- Make change using bills and coins.
- Manage money so that you can pay your bills.
- Balance a checkbook.
- Write a check or fill out a money order.
- Keep records and receipts to file income tax forms.
- Add the total (plus tax) of a purchase.
- Prepare and stick to a budget.
- Be able to tell when you are not getting satisfactory service (like from doctors, lawyers, mechanics, etc.)
- Take good care of your belongings and property.
- Decide which purchases you make are necessary and which are not.

As with the survey of occupational adaptability competencies, the NCRVE project staff will continue to analyze these data, particularly for differences in importance that may reflect a different sense of priorities and needs of various socioeconomic and ethnic/racial groups.

Northwest Regional Educational Laboratory Functional Literacy Project

Recognizing that people's mastery of and need for reading, writing, and other skills vary tremendously according to their societal circumstances and personal situations, the Functional Literacy Project at Northwest Regional Educational Laboratory (NWREL) designed a procedure to identify the specific literacy needs of a community. The process is now being field

tested in one site. A three-phase procedure has been outlined for this study (Reder, 1978):

- *Phase I*—Identification of the ways in which literacy skills are patterned into people's daily lives. This identification will entail gathering such information as: "What do people in the community read in the course of their everyday activities?" and "What materials are used?" The researchers will also attempt to identify where and how literacy is acquired and how literacy affects oral and written communication. The information gathered will be used to ascertain the different life domains (e.g., work, social life) in which literacy skills are used and the value placed on those skills.
- *Phase II*—Select one or more life domains for intensive investigation. Community interest and the opportunity to conduct research will be considered in the selection of the domain(s), and the procedures used in Phase I will then be applied more intensively to the domain(s) selected.
- *Phase III*—Design and delivery of literacy instruction. The instructional component will also enable project staff to collect longitudinal data regarding adult literacy development.

Implicit in the above process is an awareness of literacy as a contextual tool. Use of written materials is seen as part of a broader activity, and is affected by the materials pertinent to this activity and other components of a total situation. While a lengthy and involved procedure, it is one that shows great potential for identifying more accurately the competencies necessary for successful functioning in a specific location and for a specific purpose.

5. Summary of Purposes and Procedures

The studies presented in this paper vary in their purposes, procedures used, and manner of stating the competencies and of asking questions on a survey. This is inevitable considering the many judgments that the study directors and sponsors had to make. This variability makes cross-referencing difficult and, at times, quite subjective.

As a prelude to the comparison of competency objectives presented in section 6, the variations in purpose and method are presented first. These should assist the reader in interpreting the various findings and using the summary charts. Collectively, these studies had several purposes:

- To identify necessary competencies for adults nationally, regionally, within a state, or within a portion of a state.
- To determine the learning needs of adults.
- To gather data for curriculum decisions.
- To ascertain the applicability of or receptivity to competencies specified by the APL study.
- To provide a model for program personnel to determine the needs of their students.
- To expand upon the APL list.

Several studies included multiple purposes. Table 3 summarizes the purposes for conducting each of the studies.

TABLE 3

PURPOSES OF STUDIES

Purposes \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
To identify necessary competencies (necessity)	X		X	X			X		X	X	X	X
nationally	X										X	
regionally		X										
statewide			X		X	X	X		X	X		
portion of a state				X				X		X		X
To determine the learning needs of adults (interest)			X	X	X			X		X		
To make curriculum decisions	X	X	X			X	X					X
To ascertain the applicability or receptivity to APL		X	X		X							
To provide a model for local needs assessment for programs						X				X		X
To expand APL list				X						X	X	

A list of possible procedures for identifying competencies and an indication of procedures used in each study are summarized in table 4. These procedures include:

- Collecting prior literature and data from a variety of sources. (An X next to "Collecting prior literature and data" indicates information other than APL.)
- Collecting additional information:
  - —Questioning adults regarding what they need to know or are interested in learning (qualitative).
  - —Asking experts or providers of services to adults to identify what adults generally or clients of a service need to be able to do.
  - —Asking people to respond to a list of pre-specified competencies and to indicate necessity or interest (quantitative; questionnaires/surveys).

TABLE 4

SUMMARY OF PROCEDURES USED TO IDENTIFY COMPETENCIES NEEDS

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
Collecting prior literature and data from a variety of sources	X						X		X	X	X	
Collecting additional information:												
a) Questioning adults regarding what they need to know or are interested in learning (qualitative)				X				X				
b) Asking experts or providers of services to adults to identify what adults generally or clients of a service need to be able to do	X								X	X	X	

TABLE 4 (continued)

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
c) Asking people to respond to a list of pre-specified competencies and to indicate necessity or interest (quantitative; questionnaires/ surveys)		X	X	X	X	X				X	X	
d) Analyzing what people do in relationship to performing certain roles or activities									X			X
e) Selecting models of people "functioning successfully" and analyzing behaviors and qualities that are related to success												

TABLE 4 (continued)

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
Administering tasks to a sample of adults												
a) Multiple-choice, open-ended items	X		X		X					X		
b) Performance-based tasks												

—Analyzing what people do in relationship to performing certain roles or activities.

—Selecting models of people "functioning successfully" and analyzing behaviors and qualities that are related to success.

•Administering tasks to a sample of adults:

—Multiple-choice, open-ended items.

—Performance-based tasks.

The procedures marked for each study are those specified in the reports. Although the New York State program model uses performance-based assessment to award diplomas, that procedure was not used to determine minimal competencies to be required in the program. Thus, two methods for determining minimal competencies—analyzing the behavior and qualities of persons functioning successfully, and administering performance tasks to a sample of adults—were not employed by any of these efforts.

Because they were done prior to the publication of the APL study, neither the Adkins-Connecticut study nor the New York State listing of minimal competencies was influenced by the APL findings. Additional data sources for these efforts and the Utah study included: (1) Bureau of Labor Statistics data and expenditure pattern data; (2) consumer and social service agencies; (3) studies regarding adult development; (4) other sociological writings; (5) general literature regarding competency.

6. Summary of Competencies

To compile the cross-reference Summary of Competencies from the studies reviewed, the 65 APL objectives were used as the base list. The use of the APL category labels and objectives does not imply a preference for the organization and use of terms presented in APL. Rather, the choice seemed reasonable as a purely practical decision since many of the studies were designed with direct reference to APL.

To prepare the cross-reference list, each APL major objective and the enabling objectives associated with it were listed. For each study (with the exception of the NWREL Functional Literacy Project, which has not yet produced a set of competency statements), the competencies included were cross-referenced against the APL enabling objectives. Cross-referencing at this level of detail revealed variations in emphasis and inclusiveness.

Decisions regarding congruence of the competency statements required substantial judgment. Variations in phrasing and organization of competency statements across studies frequently made it difficult to judge the original researcher's intent and the extent of similarity with APL statements. Such decisions were somewhat clearer with the APL validation studies, so long as the basic comparison was with the major objective. Even for these studies, however, there were inconsistencies in scope and procedures. For example, the number of items used to determine necessity of APL consumer economic competencies ranged from 8 in Pennsylvania to 43 in the New Jersey ESL study. In some cases, researchers used several statements that paralleled enabling objectives under a competency; in other cases, one statement roughly paralleled several APL enabling objectives under a competency. Sometimes, no statements were included for a particular APL objective. The authors of these reports were asked to

review these judgments, and either agreed or made suggestions for change. Most of their recommendations were readily accepted.

The variations in items from the statement of APL objectives may have resulted from several considerations: (1) desired length of the overall survey; (2) comprehensiveness or simplicity of the original APL statements; and (3) researchers' own judgments regarding importance. The final statements often represented a trade-off between creating succinct, readable items and conveying a competency rather than a task. The less specific the item, the more the respondent could read into it. The exact behaviors respondents associate with a competency statement may also vary, demonstrating the difficulty of obtaining reliable responses to the competencies intended when preparing instruments.

Considering the variations across the studies, it seemed appropriate to list the main intent of the original APL competency, especially since the more recent APL listing contains objective statements that are phrased somewhat differently than the original list of 65 objectives. Therefore, the objectives listed in the Summary of Competencies are topical—roughly parallel to the APL major objectives—rather than a series of competency statements.

The Summary of Competencies is in four parts:

- Part 1—Knowledge/Information Categories.
- Part 2—Basic Skills.
- Part 3—Major Objectives by Competency Area.
- Part 4—Additional Objectives (i.e., not emphasized in APL, but included in other studies).

Most of the studies covered all five of the APL knowledge categories. Consumer economics and occupational knowledge, however, seemed to be emphasized more. The Utah effort considered only consumer economics, but on closer examination, many of its statements related to APL objectives in the community resources, health, and occupational knowledge areas. Community resources, an area often ranked as low in importance by ABE students and staff, received a greater emphasis in two listings (Adkins-Connecticut and New York). The low perceptions of importance for community resources, however, were often a response to the specific APL objectives. Use of community resources was included in the other four knowledge areas as part of many other competencies (e.g., "using community resources to deal with fradulent practices" might be included in a consumer economics section). Cultural and self-awareness was an additional knowledge category not emphasized in the APL presentation but used in several studies.

The summary of basic skills also required a great deal of the writer's judgment in considering the direct statements in the reports, knowledge of the studies, and inferences drawn from the competency statements. The findings, when considered in conjunction with practice and practitioner comments, underscored the perceived importance of reading, writing, and math skills and of preparation for passing the GED test for high school equivalency. While problem-solving and interpersonal relations skills were included in the APL matrix, the perceived importance of these abilities varied. At least two—Adkins and New York—appeared to emphasize these skills more heavily than did the APL-related efforts.

Parts 1, 2, and 3 of the Summary of Competencies used the APL listing of 65 objectives as the basis of comparison, although some modifications and a few additions were introduced. The summary indicates the degree of correspondence between the individual studies and the APL baseline list.

In four of the studies—NWREL USOE Region X, New Jersey ABE, New Jersey ESL, and NCRVE—the respondents indicated whether they thought the competency was necessary, important, or helpful in accomplishing tasks of adult life. The summary reports the percentage who felt this was so. In the Alaska project, the 81 statements were ranked in order of priority. The summary lists the ranking for each.

Part 4 of the summary lists competencies that were added by the studies not limited to the APL. In these cases, no judgments as to degree of relatedness were made.

While the Summary of Competencies indicated correspondence among the various topics considered, it did not totally convey the variations in emphasis. For example, the APL listing incorporated a strong emphasis on basic skills in all objectives. The Adkins list was comprised of a series of problem, not competency, statements. Many of the validation studies—the New Jersey ones and Alaska, for instance—were comprised of a list of general statements that may have corresponded to a major goal or to several of the substeps under that goal.

It must also be remembered that several of the studies were limited to only certain knowledge areas (e.g., consumer economics). Decisions regarding which components to include and how to phrase the statements determined what choices the respondents could make about the importance of a competency. The inclusion of a topic or skill on a survey represented the researcher's and sponsor's judgment about what was important. Thus, these judgments about what would and would not be included in the survey, as well as the presentation of the items and questions, established the limits for the responses.

This Summary of Competencies is not intended to be a definitive listing. It is useful in pointing out those areas that a number of large-scale studies have determined as important or necessary for functioning in adult life. There appears to be a fair amount of consistency across the 11 projects included, as well as a number of areas in which one or more of them have put greater or lesser emphasis. The topics listed by those studies not limited to APL indicate other areas to be considered.

The purpose of the summary and this report is to assist Adult Basic Education program administrators and instructors in selecting those areas that would be appropriate for their programs. Variations according to region, state, locality, population group, and individual student needs are likely to continue to exist. Those who are considering program changes consistent with new emphasis in the Adult Basic Education Act are urged to look at the results of these studies as a starting point. Substantial time and effort could be saved by adapting these competencies to individual program and student needs rather than beginning the process all over again.

SUMMARY OF COMPETENCIES, PART 1: KNOWLEDGE / INFORMATION CATEGORIES

Category \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Consumer Economics	●	●	●	● 37% h 60%	●	●	●	●		●	●	●
Community Resources Problems in living in community	●	●		● 24% h 48%		●	●	◑	⊙	⊙	◑	
Government and Law Citizenship	●	●		● 38% h 71%		●	●			●	●	
Health and Safety Marriage and family problems Problems of being a parent	●	●		● 28% h 52%		●	●	◑	⊙ ⊙	●	●	
Occupational Knowledge	●	●		● 40% h 71%	●	●	●	◑		●	◑	●
Cultural Self-awareness Social awareness Problems in personal growth and development								●	●	● ●		

Key to Symbols: ● = essentially the same as APL; ◑ = emphasis on a sub-category of APL;
⊙ = essentially the same as APL, but with greater emphasis; o = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

SUMMARY OF COMPETENCIES, PART 2: BASIC SKILLS

Skills \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Communications Skills	●	●	●	●	●		○	○	◑	●	◑	○
Reading	●	●		●		●				●		
Writing	●	●		●		●				●		
Listening, speaking, viewing	●	●		●						●		
Language				●	●							
Computation Skills	●	●	○	●	●	●	●	○	○	●	◑	◑
Scientific awareness							p 61			●		
Interpersonal Relations	●	●					◑		◉	◉	●	●
Problem Solving (making decisions)	●	●				●			◉	◉		
Specific Job Skills				●					●			●

Key to Symbols: ● = essentially the same as APL; ◑ = emphasis on a sub-category of APL;
◉ = essentially the same as APL, but with greater emphasis; ○ = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Consumer Economics

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Counting and converting coins and currency, weights, and measures	●	●	● 61%	◑ 15% h 15%	◑ 65% 72%	◑	● p 38 p 67		●	◑	●	○ 67%
Understanding income tax	●	●		◑ 60% h 16%		◑	● p 1	●	●		●	○ 50%
Managing money (budgeting) and consumerism	●	●	● 75%	◑ 48% h 19%		◑	● p 4 ○ p 39	●	●	◉	●	● 65% 37% 46%
Using catalogs	●	●	● 50%			◑	● p 68	●	●		●	● 17%
Using consumer guides, making decisions about purchases	●	◑	● 64%		● 79%	●	◑ p 39	●	●	○	◑	◑ 28%
Factors that affect costs of goods and services	●	◑			● 69%	○	○ p 48	●	●		●	○ 35%
Understanding how changes in the economy make a difference in how much you have to spend												33%

Key to Symbols: ● = essentially the same as APL; ◑ = emphasis on a sub-category of APL;
◉ = essentially the same as APL, but with greater emphasis; ○ = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

Consumer Economics (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Comparison shopping; price vs. quality	●	◑	◑ 64%	○ 33% h 29%	● 73% 68% 88%	○	○ p 48	●	●	◑	◑	○ 25%
Packaging of goods; cost-effectiveness for quality and storage	●		◑ 35%		● 75%	○		●	●		◑	
Sales (understanding and making decisions to buy)	●	◑	◑	○ 20% h 17%		○	● p 50		●	◑	◑	○ 47% 25%
Understanding advertising techniques	●	◑	◑	○ 20% h 16%	● 84%	◑	◑ p 18	●		◑	●	● 31% ◑ 37% ○ 24%
Ordering food and tipping in a restaurant	●	●	● 16%	● 11% h 8%	● 66% 70% 52%	○	● p 75 p 80	●			○	
Purchasing home furnishings	●	◑	◑ 54%		75%	◑	○ p 64	●	●	◉		○ 37% 19% 25%

Consumer Economics (continued)

Study / Objective	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Obtaining housing, utilities	●	●	● 73% 58%	◑ 38% h 20% 38% h 18%	◑ 72% 64% 44% 84% 69% 63% 72% 76%		● p 55 p 60 p 70	●	●	●	●	o 27% 33% 31%
Buying and maintaining a car	●	●	● 64%		o		● p 58 p 47	●			●	
Care of personal possessions (cleaning, having things fixed, warranties)	●	●	● 53%	o 43% h 26%	o 72% 88%	◑	● p 65 p 64				●	● 39% 27%
Banking services	●	●	● 50%	◑ 36% h 19%	84%	◑	● p 29	●			●	◑ 51% 52% 31% 33%
Obtaining mortgages												31%
Determining the most profitable way to save money												

Consumer Economics (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Understanding credit systems	●	●	● 58%	● 20% h 20%	◑ 73% to 79% Several items	○	● p 36	●		◉	●	○
Establish a credit rating												30%
Bank loans												36%
Financing through a store												28% 28%
Understanding and selecting insurance	●	●	● 71%	◑ 46% h 19%	◑ 78%	◑	● p 8	●	●		●	● 30%
Fraudulent practices; resources for protection	●	●	● 68%	● 62% h 17%		●	● p 3	●	●	◑	●	◑ 24% 30% 27%
Consumption of world resources; individual's responsibility	●	●	● 53%				● p 52	◑			●	◑ 27%

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Occupational Knowledge

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Sources of employment	●	●		◑ 27% h 24%	● 79% 74% 75%	◑	● p 13 ○ p 63	●	●	●	●	● 26%
Requirements of different occupations	●	◑			● 84% 77% 81%	◑	● p 16 ○ p 10	●	●	◑	●	● 29% 40%
Occupational interests (testing and counseling)	●	●		● 44% h 25%	● 85%	◑	○ p 16 p 24	●	●	◑	●	● 40%
Private and other employment agencies	●	●			● 75%		● p 27 ○ p 24	●	●	○	●	● 26%
Job applications and interviews	●	●		● 46% h 27% 31% h 24%	● 82% 79% 62% 91%	●	● p 54 p 20	●	●	◉	◑	◑ 29% 28%

Occupational Knowledge (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Standards of behavior for types of employment	●	●		● 34% h 19%			◑ p 5 p 44	●	●	◑	●	● 37% 51% 32% 44% 45% 48%
Attitudes and skills that may lead to promotion	●	●					● p 5 p 6	●	●		●	● Range from 20-35%
Financial and legal aspects of employment	●	●		o 46% h 19% 53% h 22%	● 84% 77% 81% 71% 77%		o p 9	●	◑	o	◑	◑ 24% 33% 18% 19% 22%
Aspects of employment other than financial that affect job	●				● 77% 66% 63%		● p 56	●	●	◑	●	● 40% 32% 51% 27% 39% 28%

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Community Resources

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Types of community resources	●	●					● p 49	●	●	●	●	
How and when to apply for community services, such as social security and medicare	●	●		● 40% h 22%			● p 71	●	●	◑	●	
Recreational services	●	●		● 13% h 16%			● p 59	●	●	◑	●	
Informational services (e.g., media, telephone, library)	◑	●		● 44% h 30%			● p 49	●		○	●	
Resources for acting on citizens complaints	●					○	◑ p 3 p 35	●	●	◑	●	◑ 27%
Recognize traffic signs, driving regulations, safety	◑	●		● 17% h 11% 27% h 14%			● p 66 p 72		●	◑	●	
Transportation schedules, fares, informational resources	●	●		● 10% h 15%		●	● p 75	●	●	○	●	

Community Resources (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Time zones, daylight savings time	●						●		●			
Making travel plans, arrangements	●	●				◑	● p 46	●				
Relationship between transportation and public problems (traffic problems, energy)	●					o		●	●			
Understanding the influence of mass media		●					● p 51 p 57					

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Health

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Safety measures; prevention of injury and accident	●	●		o 45 h 15			● p 7 p 34		●	◑	●	
Medical and health services in the community	●	o						●	●	o	●	
Pregnancy and prenatal care	●	●					● p 77 p 79		●		●	
Family planning and birth control	●	●		● 16% h 11%			● p 78 p 81	●	●	o	●	
Child-rearing practices and procedures for guarding health and safety of a child	●	●		o 16% h 9%			● p 41 p 17 p 49	●	●		●	
Health needs and concerns of the adolescent and ways to ease transition to adulthood	●	●					● p 11 p 25 p 26	●	●		●	

Health (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Maintaining good mental and physical health	●	●		○ 36% h 24%			● p 12 p 37	●	●	◑	●	
Understanding self and interpersonal relationships	●	●					● p 37 p 19		●	◑	●	
First aid and emergencies	●	●		○ 31% h 20%			● p 2 p 17			◑	●	
Health and medical insurance	●	◑					○ p 8	●	●			
Proper nutrition	●	●		32% h 21% 16% h 24%			● p 42 p 43 ○ p 14	●	●	◑	●	
Use of drugs and Federal control of drugs	●	●					◑ p 31		●	◑		
Marriage and family decisions, responsibilities, relationships		●					● p 53 p 69		●		●	

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Government and Law

Study / Objective	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Structure and function of the Federal Government Constitution, branches, etc.	●	●		○ 36% h 26%			● p 21 p 32		●	○	●	
(also state and local governments)							● p 30 p 28					
Participation in government process										●		
Relationship between individual and the government	●	●		◑ 30% h 15%			● p 23		●	◑		
Relationship between individual and the legal system	●	●		◑ 45% h 18% 31% h 17%			● p 23 p 33 p 35 p 15 p 8		●	◑	●	
Legal documents, contracts	●	●					● p 22 p 40				●	
Relationship between government services and taxes	●			47% h 19%							●	

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

Utah Study

Major Objective: Consumers' Role in the Economy

Enabling Objectives

- Should recognize that in a free enterprise economy expenditures amount to an economic vote for type and quality of goods
- Must recognize that by becoming an efficient and effective decisionmaker they will improve society's allocation of resources
- Fundamentals of how a free economy works and how the role of consumer affects overall market structure
- Knows importance of effective and efficient decisionmaking, management concepts and techniques

Major Objective: Introduction to Life Cycle/Life Style Concepts

Enabling Objectives

- Awareness that life cycle positions have effect on problems individuals face
- Should understand the life cycle concept and its effect on life style or personal consumption
- Recognize that life cycle analysis can be effective planning aid

Major Objective: Telephone Services

Enabling Objectives

- Should be aware of total costs of telephone service and habits which can save money
- Needs to know how costs vary with types of service
- Awareness of advantages that telephone services offer
- Awareness that vendors other than phone company distribute telephone equipment

Major Objective: Wills

Enabling Objectives

- Parents and persons with substantial assets have obligation to prepare a will
- Consumers should believe that it is important to have estate plans reviewed periodically by an attorney
- Consumer should know what legal skills vary automatically from one attorney to another
- Should know the basic laws of descent and distribution
- Should know how gifts, trusts, and estates are taxed

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

Adkins-Connecticut Study

Major Objective: Problems of Living in the Community

Enabling Objectives:

- Dealing with conflicts between own children and neighbors' children; also dealing with unreasonable neighbors
- Special problem of recent unemployment and the maintenance of housing
- Overcrowding, particularly for families with many children, exacerbates family conflicts and tensions
- Fear of danger from others on dark nights going to and from public transportation
- People on welfare do not have adequate resources for transportation to and from school
- Psychological consequences of lack of adequate transportation
- Dealing with school boards and school officials
- Not feeling a part of the community through participation in community

Major Objective: Problems of Being a Parent

Enabling Objectives

- Disappointment with the school system
- Misdiagnosis of child as having a learning disability
- Dealing with special problems of retarded, physically handicapped, or hyperactive children
- Helping handicapped children with feelings of rejection and exclusion
- Getting help in dealing with handicapped children
- Finding out about day care facilities
- Identifying responsible people to care for children
- Need for babysitter or day care in order to go to school or work
- Lack of after-school and summer programs for children
- Adult at lower educational level than children feels inferior
- Dealing with separation, divorce, or desertion
- Dealing with lying, theft, and sneaky behavior
- Dealing with neighbors' children and neighbors
- Problems of child abuse
- Helping children with problems of death

Adkins-Connecticut Study (continued)

Major Objective: Marriage and Family Problems

Enabling Objectives

- Deterioration of marital relationship and family life after prolonged unemployment
- Helping one's spouse deal with feelings of failure due to unemployment
- Husband takes out frustrations on wife and family
- Money problems are major source of argument between husband and wife
- Conflicts over raising children from a previous marriage
- Difficulties of divorce
- Difficulties in meeting someone of the opposite sex
- Unemployment and loss of income makes household management extremely difficult

Major Objective: Occupational and Career Problems

Enabling Objectives

- Belief that fate or chance determines what job you get and in an inability to affect destiny
- Limited access to on-job-training programs, summer employment, etc.
- Problems that prevent certain groups from enrolling in educational and training programs
- Need for training leading to taking correspondence and inevitably failing
- Lack of coordination between employment and training agencies
- Difficulty in communicating with physicians
- Impersonalness of doctors
- Lack of concern by doctors about medical aid patients, and refusal to see welfare patients
- Inability to get any doctor to come to the house

Major Objective: Problems in Relating to Others

Enabling Objectives

- Knowing how to interpret the facial expressions of others
- Giving in to children's wishes because of peer pressure
- Dealing with discrimination because of being too short, fat, or a minority
- Avoiding opportunities because of fear of being discriminated against
- Discrimination against women in employment
- Dealing with and resolving conflicts between different kinds of life demands
- Difficulty in balancing home and family responsibility and responsibility to self
- Feeling that there are very few places that one can admit one's ignorance

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

New York External Degree Program

Major Objective: Self-Awareness

Enabling Objectives

- Apply the decisionmaking process
- Identify one's own values, goals, roles, and needs
- Awareness of art in everyday life
- React to or create an exhibit
- React to a live performance
- Identify uses of music to manipulate emotions

Major Objective: Social Awareness

Enabling Objectives

- State contributions of a different culture to American life
- Use history in making decisions or plans
- Function within a group
- State the effects of one group upon another
- State the relationship between the individual and the environment
- Communicate in a socially acceptable manner
- Recognize and share fundamental assumptions and world views about concepts such as fairness, truth (philosophy, science, history)
- Identify the diseases and other health problems associated with one's family
- Recognize normal physical and emotional changes associated with various states of life
- Make family decisions with family members
- Recognize social norms in a variety of situations and exhibit cooperative skills for participating in social life—get along with others

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

California Study

Major Objective: Occupational and Career Problems

Enabling Objectives

- Problems that prevent certain groups from enrolling in educational and training programs
- Use the tools and equipment the job calls for
- Follow rules and policies
- Use material and knowledge of other people to develop job interests
- Manage one's own time and activities
- Use the reading and math skills the job calls for

Major Objective: Relating to Others

Enabling Objectives

- Dealing with discrimination because of being too short, fat, or a minority
- Discrimination against women in employment
- Knowing how to interpret the facial expressions of others
- Use history in making decisions or plans
- State contributions of different culture to American life
- State the relationship between the individual and the environment
- Communication in a socially acceptable manner
- Recognize and share fundamental assumptions and world views about concepts—fairness, truth (philosophy, science, history)
- Identify the diseases and other health problems associated with one's family
- Recognize normal physical and emotional changes associated with various stages of life
- Make family decisions with family members
- Be aware of life cycle positions and their effect on planning future, solving problems, life style and personal consumption patterns

Major Objective: Being a Successful Consumer

Enabling Objectives

- Decide if a more expensive item is worth the extra cost
- Decide what gives you the best return (or profit) on your money, if you want to save money
- Understand how changes in the economy make a difference in how much you have to spend
- Establish a credit rating

California Study (continued)

- Get a mortgage on a house
- Fix things when they break or tear
- Find the right person to sell something to you
- Be able to tell when you are not getting satisfactory service (as from doctors, lawyers, mechanics, etc.).

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

National Center for Research in Vocational Education

Major Objective: Adaptability in the World of Work

Enabling Objectives

- Use the tools and equipment the job calls for
- Follow rules and policies
- Persuade others to one's way of thinking
- Use material and knowledge of other people to develop job interests
- Ask for a raise in salary
- Manage one's own time and activities
- Use the reading and math skills the job calls for

Major Objective: Being a Successful Consumer

Enabling Objectives

- Decide if a more expensive item is worth the extra cost
- Decide what gives you the best return (or profit) on your money, if you want to save money
- Understand how changes in the economy make a difference in how much you have to spend
- Establish a credit rating
- Get a mortgage on a house
- Fix things when they break or tear
- Decide between selling something large yourself, such as a house or car, or having someone sell it for you
- Find the right person to sell something to you
- Decide between renting or buying something you may not need very often
- Be able to tell when you are not getting satisfactory service (doctors, lawyers, mechanics, etc.).

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THE APL STUDY: SCIENCE, DISSEMINATION, AND THE NATURE OF ADULT EDUCATION

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THE APL STUDY: SCIENCE, DISSEMINATION, AND THE NATURE OF ADULT EDUCATION

> Education is America's magic....If the economy is to sustain, some development dollars must be reinvested in adult education. We believe this is the best application of dollars for investment in order to return to the society the magic multipliers of American adult education.
>
> *William Flowers and Linda Hartsock representing the Adult Education Association and the National University Extension Association in testimony before the United States Congress, 1977.*

If education is America's magic, then adult education is surely an important and growing part of the show. Since passage of the Adult Education Act of 1966, enrollments in adult education state grant-supported programs have grown from around 380,000 to more than 1.2 million in 1975 (U.S. Congress, 1977, p. 105). According to data from the National Center for Education Statistics (NCES), the number of adult education participants grew from 8.3 million in 1957 to 18 million in 1975 (Golladay, 1976).

This remarkable growth has been coupled with an upsurge of interest in a new form of adult education—namely, competency-based adult education. Malcolm Knowles, in his *History of the Adult Education Movement in the United States* (1977), has described this new interest and one of the major motivations behind it.

> The greatest swell of competency-based education for adults...occurred following the report of the findings of the Adult Performance Level (APL) Study in October, 1975. Funded with $1 million from the Office of Education's Adult Education Division, the first phase of the Study—an assessment of the functional competency of American adults—took just over four years to complete. Its general finding that one out of five (19.8 percent) adults lacked the skills and knowledge needed to function effectively, another 33.9 percent were marginally competent, and only about 46.3 percent were functioning with any degree of real competence, jolted the educational world....

> Even before the Study was completed many state departments of education and local school systems had started developing APL competency-based programs and materials and conducting workshops to help teachers become competent in using the new approach.

Despite its widespread impact, the APL project has been subjected to relatively little critical scrutiny. The principal critical reviews of the APL project are by Griffith and Cervero (1976, 1977), Nafziger et al. (1975), and Heller et al. (1978). Ronald Cervero, for example, has argued that the key assumptions of the APL study rely on "faulty reasoning," and he has concluded that the APL test does not measure "functional competence but is really just a test of the three R's" (Cervero, 1980).

The juxtaposition of this growth and strong criticism is the subject of this paper. Our question is simple: If APL has the flaws that its critics say it has, why has it had such a pervasive impact on adult education in this country? We begin in section 1 by summarizing the APL study and its history. In section 2, we outline the criticisms of the APL study. And in section 3, we consider why, despite serious shortcomings, the APL study has caused such an apparent upheaval in adult education. We go on to suggest that these considerations raise important questions concerning both the recent enthusiasm for competency testing in American education and the means by which educational ideas and innovations are communicated and influence educational endeavors.

One important distinction should be made clear at the outset. In sections 1 and 2, we limit our attention to the original APL study and tests developed on the basis of that study and published by the American College Testing Program. We do not comment on APL curriculum materials that have been developed subsequent to the APL study. This distinction is important because many of the criticisms leveled against the APL study and tests are not necessarily relevant to APL curriculum materials. Indeed, as we show in section 3, some of the assumptions implicit in APL curriculum materials are contrary to those embodied in the APL study and test, and are, we think, more appropriate for the diverse needs and concerns of adult learners.

1. The APL Study and Its Progeny

> One out of five American adults lacks the skills and knowledges (sic) to function effectively in the basic day-to-day struggle to make a living and maintain a home and family.
>
> *HEW NEWS. U.S. Department of Health, Education and Welfare, 10-29-75.* (quoted in Heller et al., 1978)

What led the Department of Health, Education, and Welfare to issue such a proclamation? If true, surely such a state of affairs is as worrisome as an unemployment rate of 20 percent. For this news release says not just that adults lack jobs or lack skills for jobs, but that they

lack the requisites to function effectively in life. To explain this astounding conclusion, we go back to the origins of the APL study.

Origins of the APL Study: 1970-1973

In August 1970, the Division of Adult Education of the U.S. Office of Education (USOE) issued a Request for Proposals for a research project that would establish an adult education system based on a new definition of adult functional literacy. The RFP explained:

> The challenge is to foster through every means the ability to read, write, and compute with the functional competence needed for meeting the requirements of adult living. The emphasis of this definition is on its final phrase, "requirements for adult living." These requirements must be determined by an analysis of adult living rather than the common practice of attaching a grade equivalence to them....A system of adult education must derive its own specific aims and have its own adult based curricula, methodologies, and materials. (Quoted in *Final Report, APL Study*, 1977.)

In the summer of 1971, a contract for the project was awarded to the Texas State Education Agency, which in turn subcontracted most of the work to the Division of Extension of the University of Texas at Austin. On the basis of "a review of related literature and research," "an extensive survey of state and federal agencies and foundations," "a series of conferences on adult needs...in different areas across the country," and "a series of semi-structured interviews with undereducated persons...in the Austin area," the project staff developed a taxonomy of areas of need "particularly appropriate for the undereducated adult."

The taxonomy consisted of a matrix of basic skills and general knowledge areas in which each of the basic skills might be applied. The basic skills were communication (reading, writing, speaking and listening), computation, problem solving, and interpersonal relations.* The general knowledge areas were occupational knowledge, consumer knowledge, health, community resources, government and law, and transportation. The project staff explained this two-dimensional approach to defining adult competencies as follows.

> (T)he basic skill areas play a major role in defining the minimum level of performance within each of the general knowledge areas. The attainment of the basic skills in themselves do not (sic) distinguish the successful from the unsuccessful, however the application of these skills within each knowledge area help define the minimum level of performance that an adult must obtain. (*Adult Performance Level Study*, 1973)

In order "to define 'functional' literacy in terms of observable behaviors in certain skills relating to a set of needs which have been identified as being important to 'success' in adult life," (*APL Study*, 1973), two steps were deemed essential. First, the inquiry would need to construct criteria by which "success" in society might be measured and in terms of which the adult competencies might be validated. Second, the behaviors presumed to represent adult competence must be shown to be empirically related to the criteria of success.

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*The 1973 APL report refers to communication skills apparently as encompassing reading, writing, speaking and listening, *and* computation.

To accomplish this, APL project staff undertook a field study to validate possible adult competence measures in terms of success in society. The 1973 APL study report explains that three types of variables afforded measurable indexes of success: "occupational prestige, weekly income, and level of education," the latter considered both in terms of level of adult basic education and years of formal schooling.

Having developed the taxonomy of adult competencies in terms of a matrix with basic skills on one dimension and knowledge areas along the other, the project staff constructed "lists of adult-life situations in each area of need." Test items developed from this list were then administered to a sample of some 4,000 adult volunteers, most of whom were participants in adult education programs, in 30 states.

The 1973 report does not make clear exactly how test items relevant to "adult-life situations in each area of need" were developed or selected, nor exactly how many items were field tested. The report simply presents a "revised list" of adult performance items that was "developed from the initial list and from analysis of the test data." The bulk of the 1973 report (almost 200 out of 280 pages) consists of "field validation results" discussed in terms of the six APL knowledge areas.

Although the report emphasizes the matrix approach to defining adult competence in terms of both skills and knowledge areas, the presentation of results dispenses with the skill dimension in a single sentence: "Performance in terms of basic skills of reading, writing and computation are included within the following discussion" of knowledge area results. (The final APL report, however, does deal with both dimensions.) Field trial results are presented item-by-item for some 170 items grouped into the six knowledge areas. For each item, percentages of the trial sample providing correct responses are reported in terms of different levels of each adult success criterion variable. Chi square scores were calculated to ascertain whether results on each item showed a statistically significant relationship with the criterion variables. All 175 items showed a significant association with one or more of the criterion variables.

After describing the field validation results, the 1973 report presents the "most important 'product' of the first year of work in the APL study," namely, APL goals, objectives, and tasks. The report explains simply that this listing constitutes "requirements for adult living which we have tentatively identified as contributing to success in adult life (in the sense of being positively related to various criteria for success)." The report concludes:

> *For the first time, there is a body of research which offers guidance on what we should be teaching our students in ABE. This project has defined a system of adult needs and has described an array of behaviorial tasks keyed to these needs which, for the most part can be demonstrated to be positively related to various measures of success in adult life.* (Emphasis in original.)

APL Project, Phase Two: 1973-1975

The second phase of the APL project began in 1973 and is reported in *Adult Functional Competency: A Summary* (1975) and in *Final Report: The Adult Performance Level Study* (1977). On the basis of the field validation, the framework for defining adult competence and the items for measuring it were refined. The new framework retained the skills and knowledge area matrix and encompassed the same skills: communication, computation, problem solving,

and interpersonal relations. The knowledge areas dimension had one less area, now consisting of occupational knowledge, consumer economics (rather than knowledge), community resources, government and law, and health. Why transportation was dropped as a separate knowledge area was not explained in either the summary report or the final report, but it apparently became part of the community resources knowledge area.

The revised set of adult competency test items (or performance indicators as they sometimes were called) was administered to a representative sample of 7,500 adults throughout the continental United States, and three competency levels were determined in terms of performance on the APL test items. These three categories—termed APL levels 1, 2, and 3—are described in table 1. These levels are described as "conjoint" definitions "based on predicted income, education and job status," but nowhere does the final report describe how the three variables were treated "conjointly."

On the basis of the national survey and these definitions of adult performance levels, the final report concluded:

> In general, the answer to the question posed by this section is "not as competent as we thought." Overall, approximately *one-fifth of U.S. adults* are *"functionally incompetent."* This estimate is based on a representative sample of adults performing on indicators which cover the five general knowledge areas and four skills. When broken into the individual knowledge areas and skills, this level of incompetence (APL 1) *ranges from 16% for writing to 33% for computation.* Thus, at least for one of the skills deemed important for survival in this society, about one-third of U.S. adults are incompetent.

The report goes on to discuss performance level results for each of the five knowledge and four general skill areas, and variations in overall results in terms of years of education, family income, occupation, sex, age, region of the country, ethnicity, size of household, and employment status. With respect to ethnicity, the report states:

> While less than 20% of the Whites were estimated to be functionally incompetent, more than 40% of the Black and Spanish surname groups were estimated to be so.

Apparently based on the findings from the second phase of the APL study, HEW issued a press release in the fall of 1975 stating that, "One out of five American adults lacks the skills and knowledges to function effectively in the basic day-to-day struggle to make a living and maintain a home and family" (Heller et al., 1978).

Initial Reactions to APL Study

The study and its findings roused considerable attention. The title of Edith Roth's lead article in the May 1976 USOE-published journal *American Education* credited the study with causing "A Ferment in Education." She wrote:

> Today—not quite five years since the APL study began—more than 30 states are either gearing up to teach or are already teaching adults to gain competency in the 65 practical objectives which the University of Texas team developed.

TABLE 1
DEFINITIONS OF APL PERFORMANCE LEVELS*

APL 1

(Least Competent Adults)

APL 1's are those adults whose mastery of competency objectives is associated with:

1. Inadequate income—poverty level or less

AND

2. Inadequate education—8 years of school or fewer

AND

3. Low job status—unemployed or unskilled.

APL 2

(Marginally Competent Adults)

APL 2's are those adults whose n astery of competency objectives is associated with:

1. Marginal income—more than poverty but no discretionary income

AND

2. Marginal education—9 to 11 years of school

AND

3. Semiskilled to upper-level blue collar and sales job status.

APL 3

(Most Competent Adults)

APL 3's are those adults whose mastery of competency objectives is associated with:

1. Highest levels of income—varying amounts of discretionary income

AND

2. Highest levels of education—high school completion or more

AND

3. White collar or professional-management job status.

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*It should be noted that the definitions cited here are different than those given in *Adult Functional Competency: A Summary*. Why is unclear.

Source: *Final Report: The Adult Performance Level Study* (1977), pp. 16-17.

A 1977 report by USOE's Bureau of Occupational and Adult Education listed 120 current Adult Performance Level and adult competency educational projects in 34 states.

The APL approach was not only popular with adult educators around the country, but also received the seal of approval from the Joint Dissemination Review Panel (JDRP) in HEW's Education Division in March 1975.* As a result, the APL study was subsequently listed in the 1976 USOE-sponsored catalog of exemplary educational programs, *Educational Programs That Work*. Summarizing the evaluation evidence that led to JDRP approval, the catalog reports:

> Items developed from APL objectives were field tested on random samples of adults over 18 in the U.S. Five such surveys were conducted, objectives were obtained through interviews with business, industrial, and educational personnel, prospective employers, and target audiences; expert opinion; and literature research.

Given widespread national interest among adult educators and JDRP approval, the APL study offered an opportunity for commercial enterprise. In March 1975, USOE and the University of Texas at Austin entered into an agreement with the American College Testing (ACT) Program under which ACT received the "exclusive right to refine, adapt, publish, and distribute the APL materials."** As Griffith and Cervero (1977) observed:

> Under the ACT framework emphasis was placed upon developing a test that would be entirely written, whereas the Texas version had included an oral portion to measure speaking and listening.

As implemented by ACT, the "APL Program" consists of six instruments: an Adult Performance Level General Survey (containing 40 multiple-choice items and available in both adult and high school forms), and five Content Area Measures, one each in community resources, occupational knowledge, consumer economics, health, and government and law (each containing between 42 and 66 items, for a total of 249 items in all five content area measures). ACT promotional material describes the rationale behind the APL Program in terms similar to those of the original APL project:

> Because APL assessment items are linked to specific objectives and tasks drawn from everyday life, APL measures can assess functional competence more directly than traditional achievement tests.
>
> The operational matrix with which the APL program functions is related to five life skills and five general content areas. (ACTP, 1977)

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*The JDRP reviews evidence of the effectiveness of educational programs, practices, and products developed under Federal auspices prior to the expenditure of Federal funds for disseminating approved programs, practices, or products.

**APL curriculum materials currently are being published separately by Harcourt Brace Jovanovich under the title "The APL Series." These are discussed in section 3.

The ACT matrix, like that of the second phase of the Texas APL project, listed community resources, occupational knowledge, consumer economics, health, and government and law on the content area dimension. But unlike the Texas matrix, it listed identification of facts and terms, reading, writing, computation, and problem solving on the skills dimension. For the ACT Program, the "identification of facts and terms" skill was added and the "interpersonal relations" skill dropped, apparently to accommodate the multiple-choice paper-and-pencil format that is employed for ACT's APL instruments.

From such a practical point of view, it is easy to see why this skill switch was made. One might wonder, however, whether "functional competence" which includes interpersonal relationship skills and excludes identification of facts and terms skills is the same as "functional competence" which does the reverse. However, before we get too far into such specific questions, we will explore the broader literature critical of the APL study and the tests resulting from it.

2. Second Thoughts

The preceding account would indicate that the APL study was a highly successful undertaking: a 4-year research study resulting in widely publicized findings; approval by the JDRP as exemplary; adoption of APL materials into adult education endeavors in dozens of states around the country; and publication of six APL testing instruments as a commercial enterprise.

But even as these events were occurring, several observers began to ask questions about the APL endeavor. Although their comments have received relatively little attention, five critics—Acland, Cervero, Griffith, Heller, and Nafziger—seem to have raised significant and fundamental questions concerning the APL enterprise. These critics address the APL study from a variety of perspectives.

Criticisms of APL

Griffith and Cervero (1977) have suggested that the APL study is historically and educationally shortsighted. "The belief that the APL approach is novel," they wrote, "is simply naive. The main characteristics of the concept have historical precedents extending back over a hundred years."

Griffith and Cervero traced efforts to define educational objectives in terms of the demands of contemporary life back to an 1861 inquiry by Herbert Spencer. They also cite, without elaboration, Ralph Tyler's 1950 admonition that "studies of contemporary life are but one of the sources of objectives for the school curriculum and...any curriculum that drew only upon one of those sources was theoretically deficient." They mention four factors behind the historical rejection of the life-skills approach to curriculum development:

- The endless proliferation of goals and objectives to which this approach leads.
- The emphasis of the progressive education movement on the individual learner.
- Calls for a return to the critical dialectic approach to education as opposed to the life adjustment approach to learning.
- The requirement that the curriculum designer decide in advance which types of people are "good citizens, good parents or true believers."

Griffith and Cervero's point that the APL test "exemplifies a philosophy of adjustment to the existing society in that it prepares people to perform the functions which are defined by the developers as necessary for success in society" is reflected in several other criticisms of the APL endeavor. For example, Heller et al. (1978), in their critical description and analysis of the APL study and of curricula and programs that reflect the APL findings, observe:

> The major problem, as we see it, was whether the APL study was an attempt to generate competencies that are essential to survival or competencies essential to success....(T)here are important differences (methodological, pedagogical, and philosophical) in whether adult functional competency is conceptualized as meaning skills and knowledge associated with *success* in contemporary society or whether one means the essential minimal skills and knowledge required for *survival* in contemporary society.

These critics point out that the APL study attempted to have it both ways, and, as a result, confusion regarding this distinction "permeates all published reports." For example, the field validation phase of the APL study was aimed at showing significant positive associations between results on the APL test items and respondents' "success" in society as measured in terms of education, income, and occupational status. Then, after defining the three APL levels without much explanation,* the APL investigators turn around and interpret the results as showing that certain adults are "functionally incompetent." This conclusion is, we believe, arbitrary—a product of the study's failure to distinguish between "incompetence" and low levels of success, both of which were determined by the limited criteria of education, income, and occupational status.

Reviewers have also criticized the ways in which the APL survey data were analyzed and interpreted. The first comment on this aspect of the APL study, as far as we know, was by Acland (1976). He begins by noting the assumption underlying the enthusiasm for life-skills or competency testing: "Any test of competency assumes we can judge what it takes to get by, and having judged it, can measure it." Voicing dissent about this assumption, he notes two main problems with it: (1) people do not face the same problems; and (2) there are a variety of ways of solving a problem. Acland goes on to discuss three APL items to show how hard it is to find life-skills problems that all people actually encounter in their lives. The results on three other items illustrate that people do, in fact, have different avenues to problem solving, even when they face the same problem.

One APL item that Acland analyzed asked people to use a mock airline schedule to select a flight so that they could make an appointment in another city at a particular time. According

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*The APL final report explains that, "For those of you who are statistically inclined, Appendix C contains an explanation of the procedure used to create the APL levels." But when one turns to Appendix C, all that is provided is an introductory-textbook-level explanation of Bayes Theorem in terms of drawing red and black balls from urns; there are no details regarding the basis on which the three APL levels were defined. A recent paper by Williams (1977) addresses the problem of setting cut-scores for defining the three APL levels in more detail. From the description in the Williams paper (in Bunch, 1978), one might raise some serious questions about Williams' approach, but since we have not been able to obtain a copy of the Williams paper, we withhold further comment.

to the APL study, 30 percent failed to choose the correct answer.* As Acland notes, the APL developers apparently assumed that the airline schedule item measured some general life-skill or competence. Nevertheless, Acland observes:

> (T)he case can be made that there are skills which apply to checking airline schedules which are not necessary for other tasks. In that case it is pertinent to ask how many people use airlines. In September 1974, only one person in two (55 percent) had *ever* flown (Gallup, 1974). This makes the "bad" result look a lot less depressing; it [the APL finding] now seems to reflect differences in the tasks people face rather than differences in their problem solving skills.

To illustrate his point regarding different ways in which people solve the same problem, Acland cites results on an APL item indicating that only 39 percent of the population could correctly complete calculations for a partially completed Federal income tax form 1040 when provided with the pertinent information. In contrast, he cites Internal Revenue Service data indicating that only about 6 percent of individual returns actually contain arithmetic errors of any kind.

> The reason that the APL results are much more discouraging is evident; in real life people get help. In fact, about half the individual returns are signed on the preparer's line, while a special survey undertaken for the IRS shows another 10-15 percent got assistance and did not report it. So at least 60 percent of all returns are made with some kind of help.

The two points raised by Acland are essentially questions of measurement validity—ones that are particularly crucial to any effort to assess life-skills competence. First, it cannot necessarily be inferred that a person lacks a particular skill simply because he or she is unable to demonstrate it in a particular situation or type of situation. Second, just because someone lacks a particular skill does not mean that he or she will be unable to deal with a problem in a particular real life situation. In real life, and even on tests, people may bring very different skills to bear in solving the same problem.

A more recent critique of the APL study has raised questions about the validity of the APL test as a measure of functional competence. Cervero (undated and 1980) has employed a factor analysis approach and reports that his reanalysis of national survey results from an October 1974 administration of the 67-item version of the APL test has produced the striking result that the test items measure no more than three independent dimensions. Also, when he examines the items that contribute to these independent dimensions, he suggests that the APL test is essentially a test of the three R's: "The evidence suggests that individual's abilities in the three basic skills—reading, writing, and computation—probably account for a substantial amount of the variation in APL test scores." In addition, he observes: "Measurement of the three basic skills are also invariant with respect to the five (APL) knowledge areas." Cervero concludes:

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*Acland's article does not make clear the source of the APL results he cites. In personal communication (August 1979), however, Acland indicated that his source of APL data was computer printouts obtained directly from the University of Texas APL researchers.

"Based on the principle of parsimony, the APL test should be considered a measure of those things which we are reasonably sure a paper and pencil test can measure—the three R's, rather than a construct which claims to represent the universe of behaviors which an effectively functioning adult must possess."

Another approach to assessing the quality of the APL test was adopted by Nafziger et al. (1975) in their review of adult competency tests. They used a method for assessing test quality developed by the Center for the Study of Evaluation (CSE) at the University of California at Los Angeles. Without explaining the details of this test rating scheme, we note simply that Nafziger and his colleagues rated the Texas version of the APL test as good in terms of examinee appropriateness, fair in terms of measurement validity, but poor in terms of administrative usability and technical excellence (including zero ratings for concurrent and predictive validity, and test reliability).

The low ratings resulted in part from the unavailability of certain technical data on the original Texas version of the APL test. Such data (particularly reliability data) are now available for the ACT version of the test. We should also point out that the CSE approach to rating test quality has been roundly criticized by some test experts as "incredibly subjective" (Anastasi, 1978).

If one does not agree with factor analytic approach, nor the concerns of measurement experts for technical quality of tests, an alternative method of assessing the quality of a test and what it measures is to look at "correct" responses to individual test items and assess their reasonableness and accuracy. This was one approach adopted by Heller et al. (1978). They commented on two of the original APL questions in the general knowledge area of government and law.

> [APL Study Director, Norvell] Northcutt writes: "A shocking 34% of the (national assessment) sample felt that police had the authority to detain a suspect for as long as a week without bringing charges against him [not recognizing] the illegality of the situation." Because of the way the items and options are worded, there is no correct answer: "Under no circumstances" is not correct according to the Constitution of the United States which allows for the one exception if there is a state of martial law. This example is not meant to be lighthearted nor erudite: We include it as an illustration of two problems that are common to the items. First, as an example of poor item construction and/or second, of an elitist value system that suggests that most people need not know "the full story."
>
> Let's examine another item and the findings included in the national assessment. "Concerning the right to peaceful assembly, 12 percent of the sample felt that permission to have public meetings *should not* be given to certain kinds of groups; e.g., 'radicals' and 'troublemakers.' " Clearly, the wording of this item asks the respondent for an *opinion* rather than the constitutional guarantee; the proportion of "incorrect" responses may not be as surprising when interpreted in this manner. (Heller et al., 1978)

Validity of the Criticisms

This brief review of criticisms of the APL study and the test deriving from it has touched only the highlights. These five critics of the APL study and test collectively have charged that the APL study was:

- Largely ignorant of earlier relevant literature.
- Inconsistent in formulating and describing the framework and philosophy guiding the inquiry.
- In error, factually, in formulating specific test items.
- Incorrect in interpreting the meaning of test item results.
- Incomplete in analyzing test results and documenting test quality, with the result that the very attributes that the test measured were misconstrued.

Taken together, these assertions might add up to a devastating indictment of the entire APL study. What should be made of them? If we are to judge the APL study as a scientific inquiry, these criticisms are, we think, essentially correct. We might quibble with some of the critics' arguments, and also with some of their documentation, but, essentially, their perceptions of the APL study as a scientific undertaking are sound. The authors of the APL study have acknowledged some of these critics but have not responded to these criticisms in writing.* Nevertheless, these criticisms seem to be worthy of serious attention.

We can illustrate our concerns about the APL study by focusing largely on the 1973 report and thereby show our concerns about: (1) the overall logic behind the study; (2) the idea of success embodied in the study; and (3) the quality and validity of the APL test items.

The first paragraph of the 1973 report states:

> (T)he APL study is an attempt to define "functional" literacy in terms of observable behaviors in certain skills relating to a set of needs which have been tentatively identified as being important to "success" in adult life.

One need only think of recent concern in our society for the handicapped, including the visually impaired and the blind, to wonder about the plausibility of this undertaking. Being able to see is, after all, a fairly fundamental skill, but it is by no means a skill requisite to success for all people. The comparison may seem unfair; one can, after all, always find exceptions to general undertakings. Nevertheless, we think it illustrates a more general point of tremendous importance. In our variegated society, with its diversity of cultures and linguistic and ethnic groups, there can be no one set of "observable behaviors in certain skills" that are equally important to "success in adult life" for all people—*regardless* of how success is defined.

We are, in addition, more than a little uneasy with the way the APL study defined success in society—strictly in terms of income, education, and occupational status.

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*As far as we know, the only criticism that former APL Study Director Norvell Northcutt has responded to is the apparent discrepancy as to whether the APL test measures success or survival skills. Dr. Northcutt has said that, at the bottom end of the APL scale, the test measures survival skills, while in its upper ranges it measures success skills.

> The general assumption was that the more money a person makes, or the more education he has, or the higher status his or her job is accorded by our society, the more "successful" that person is. (*Adult Performance Level Study*, 1973)

One need only reflect for a moment to realize that success encompasses more than years of schooling, income, and occupational status.* These three things surely are important to many people's definition of success, but success can be had in any undertaking, not only in the seeking after money, schooling, and status. Indeed, the inclusion in the APL study of years of schooling as a measure of success and a validity criterion for the APL instrument is altogether ironic since the study began with a critique of previous definitions of adult literacy in terms of grade equivalence, noting among other points that "years of schooling completed generally overestimated actual achievement."

Nevertheless, the bulk of the 1973 report consists of item-by-item presentations of field trial results in terms of the three criterion variables, and the results for all of the 175 items show a statistically significant association with one or more of these criterion variables. However, the 1973 report also presents data, in an appendix, showing the relationships between item results and several other background variables, including ethnicity, age, and city size. Table 2 presents a tabulation of these data showing the number and percentage of the APL items covered in the 1973 report for which results show a statistically significant association with the various background data reported by respondents.** As indicated on the table, all (100 percent) of the field tested items show a significant association with years of school; 72 percent with occupational prestige; and 43 percent with income. Yet a high proportion of the item results were associated with respondents' ethnicity (95 percent of the items), age (86 percent), and city size (99 percent). *The point of these data is that the APL items apparently discriminated far more effectively in terms of people's ethnicity, age, and city size, than they did in terms of respondents' income.****

These data suggest that a striking finding from the field trial was that the APL items discriminated relatively poorly in terms of respondents' income. This point is important because much previous research has shown that income is easily the most important determinant of status in the United States. Coleman and Rainwater (1978), for example, recently concluded that "almost two-thirds of the variance in social status assigned by our respondents to hypothetical families described by income, occupation, and schooling was accounted for by income."

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*Griffith and Cervero (1977, p. 215) observe that "a measure of expressed personal satisfaction with one's vocation and general status in life" was at one point considered as an additional criterion of success, but apparently was dropped by the APL developers early in the study.

**The issue of the reliability of this sort of self-reported background data is not addressed in the APL report, but clearly is one that merits attention.

***We should note that the relationship between test item results and background variables may have been affected by the way in which the latter were collapsed by the APL study authors. (See pp. 11-12 of the 1973 study report.) It is unclear exactly how collapsing criterion variables affected the association between test item results and criterion variables. Methodological work on data aggregation suggests that it would artificially inflate such relationships. (See Blalock, 1961.)

TABLE 2

NUMBER (AND PERCENT) OF APL ITEMS (1973) FOR WHICH RESULTS SHOW A STATISTICALLY SIGNIFICANT ASSOCIATION WITH BACKGROUND VARIABLES

Knowledge Areas	Total No. of Items	Background Variables						
		Ethnicity	ABE Levels	Age	Education	Income	Occupational Prestige	City Size
Occupational Knowledge	37	31 (84%)	37 (100%)	30 (81%)	37 (100%)	15 (41%)	18 (49%)	37 (100%)
Consumer Economics	50	49 (98%)	50 (100%)	42 (84%)	50 (100%)	20 (40%)	35 (70%)	48 (96%)
Health	8	8 (100%)	8 (100%)	8 (100%)	8 (100%)	3 (38%)	7 (88%)	8 (100%)
Community Resources	22	22 (100%)	22 (100%)	18 (82%)	22 (100%)	2 (9%)	18 (82%)	22 (100%)
Government & Law	35	33 (94%)	34 (97%)	29 (83%)	35 (100%)	21 (60%)	26 (74%)	35 (100%)
Transportation	23	23 (100%)	23 (100%)	23 (100%)	23 (100%)	14 (61%)	22 (96%)	23 (99%)
TOTALS	175	166 (95%)	174 (99%)	150 (86%)	175 (100%)	75 (43%)	126 (72%)	173 (99%)

Source: Summarized from Adult Performance Level Project Staff, *The Adult Performance Level Study* (Austin, Texas: Texas Education Agency, 1973) pp. 272-285. It is not made clear what confidence level was used for this report in determining statistical significance. Hence, these data are simply summaries of results reported to be significant in the appendix tables of the 1973 report. Specifically, different portions of each exercise, which were scored separately, are treated as separate items.

Why is it that results for several dozen APL test items are associated with respondents' ethnicity, age, and city size more strongly than with their income? Since the authors of the 1973 APL study report did not even acknowledge this fact, much less explore it, we have little way to address this question directly. Nevertheless, an examination of some of the APL items suggests some possible explanations. For example, one of the 1973 APL test items was:

> Mary Dilly is a housewife. She needs to make some extra money for a while. She can type, bake, and sew. The quickest thing for her to do to make money is to:
>
> a. Apply for temporary office work.
> b. Go to school.
> c. Bake a cake.
> d. Make her own clothes.
> e. I don't know.
>
> (*The Adult Performance Level Study*, 1973)

Ostensibly, the "correct" answer to this question is option a. According to the appendix to the 1973 report, results on this item were (statistically significantly) related to respondents' ethnicity and city size, but not to their income or occupational status. It is easy to imagine why blacks and Mexican-Americans may have selected the "correct" answer to this question in smaller proportion than did whites (which the appendix data indicate they did) simply because they may have experienced employment discrimination leading them to conclude that applying for a temporary job is not a way to earn quick money. This is, of course, pure speculation, but the important point is that the assertion that there is one "correct" answer is unrealistic.

Other test items from the 1973 report are similarly ambiguous. This poor quality in test items persists in the ACT version of the APL test. Question number 13 on the ACT's APL Assessment Instrument (Form AA-1), for example:

> The city garbage truck has not picked up Esther Maxey's garbage for three weeks. Esther is having trouble keeping the flies and mice away. What should she do?
>
> a. Take the garbage down the street to an empty lot.
> b. Call the hospital to complain about the mice.
> c. Call the sanitation department about the problem.
> d. Cover the garbage with a sheet.
>
> (American College Testing Program, 1978)

We suppose that the intended "correct" answer is option c. But given the infamous inefficiency of many cities' public services, a plausible argument could be made for other answers as well. If this test item measures anything at all, surely it is only the test-taker's ability to ferret out the item-writer's sense of social propriety. But the notion that this sort of test item measures "adult competence" or even competence in figuring what to do with one's garbage is altogether preposterous.

We could go on, but we trust our point has been made: As a scientific inquiry, the APL study was very weak. Even if we put aside doubts about the existence of a general construct of "adult competence," the much publicized finding that 20 percent of American adults are "functionally incompetent" on the basis of the design, conduct and reporting of the APL study is altogether untenable. We are reminded of the conclusions drawn in the early years of mental

testing in this country concerning the average mental age of Americans. Our view of the scientific merit of the APL study's conclusion parallels that of Walter Lippman's on the idea, drawn by a Mr. Lathrop Stoddard some 57 years ago, that the mental age of Americans was only 14. One need only substitute "functional incompetence" for "mental age" to see the significance of Mr. Lippman's remarks for the APL study.

> (T)he data themselves lead to no such conclusion. It is impossible that they should. It is quite impossible for honest statistics to show that the average adult intelligence of a representative sample of the nation is that of an immature child in that same nation. The average adult intelligence cannot be less than the average adult intelligence, and to anyone who knows what the words "mental age" mean, Mr. Stoddard's remark is precisely as silly as if he had written that the average mile was three-quarters of a mile long.
>
> The trouble is that Mr. Stoddard uses the words "mental age" without explaining either to himself or to his readers how the conception of "mental age" is derived. He was in such an enormous hurry to predict the downfall of civilization that he could not pause long enough to straighten out a few simple ideas. The result is that he snatches at a few scarifying statistics and uses them as a base upon which to erect a glittering tower of generalities. For the statement that the average mental age of Americans is only about fourteen is not inaccurate. It is not incorrect. It is nonsense. (quoted in Block and Dworkin, 1976)

3. Science, Promotion, and the Nature of Adult Education

If the scientific merit of the APL study is indeed as questionable as we suggest, why did it cause such an upheaval in the world of adult education? One possible explanation has been suggested by Griffith and Cervero (1977), who point out:

> The APL approach has been thoroughly and effectively publicized and promoted by the U.S. Office of Education. It is not possible to point to any other development in the field of adult education which has been given as much sustained attention as has the APL project.

USOE may have promoted the APL study for several reasons. Some critics have charged that, from the very issuance of the 1970 RFP for a study of adult competence, USOE was committed to the proposition that the study would lead to a statement of objectives for an adult education system around which an adult education curriculum and instructional material could be developed. For example, Griffith and Cervero have commented that, "It seems remarkable that U.S. Office of Education personnel could be so certain in advance of the research they proposed to fund that this approach would undoubtedly be the chosen system (of adult basic education) for the United States."

Such expectations, at least in terms of the tenets of educational research justification, may not be as unusual as Griffith and Cervero suggest. In fact, much federally sponsored research on education is premised on the notion that it will lead to improvements in educational prac-

tice. Such initial expectations should, of course, not preclude subsequent decisions that the expectations will not be met.

Why APL Spread

As noted in section 1, the APL study was approved by the JDRP in March 1975 and listed in USOE's catalog of JDRP-approved projects (*Educational Programs That Work)* in 1976.* The APL study did not constitute an educational program. According to the APL submission to the JDRP, it represented a project to "specify the competencies which are functional to economic and educational success in today's society and to develop devices for assessing those competencies of the adult population of the United States." The APL submission went on to point out: "The APL project of itself is not a curriculum or demonstration program or pilot project or a staffing plan, or a parental involvement program, or a preservice/inservice program or any of the other kinds of activities for which the dissemination review guidelines were evidently developed." John Evans, a USOE official, later explained:

> It is true that the APL is not an educational program. However, the staff of the OE Adult Education Program has been making efforts to change the orientation of its projects from an emphasis on traditional, academically oriented basic skill materials (i.e., Dick and Jane readers) to emphasis on the achievement of functional literacy measures like the APL. They therefore wanted to disseminate that technique, and in order to do so were required, of course, to receive JDRP approval. (Evans, 1980)

Following JDRP approval, USOE moved quickly to promote the APL approach. On April 23, 1975, that agency published rules and regulations in the *Federal Register* governing Federal financial assistance to state adult education programs under the Adult Education Act of 1966. A section entitled "Establishment of national priorities in adult education," stated:

> ...the U.S. Office of Education will review and identify, for the guidance of the state educational agencies and (sic) findings from other research communities, national priorities annually in the field of adult education and as necessary, will publish current priorities in the *Federal Register*. The state educational agency may take these priorities into consideration for its guidance in the development of its annual program of priorities and objectives under the annual program plan. Each state is requested in its annual program plan to indicate how the priorities established by the state agency related (sic) to published national priorities. (*Federal Register*, April 23, 1975, p. 17957)

Included in these rules and regulations was an appendix entitled, "Priorities for Programs of National Significance," which stated:

> *Adult performance level implementation.* By the end of fiscal year 1975, the Adult Performance Level (APL) test and objectives will be completed and available for im-

*In the third edition of *Educational Programs That Work* (USOE, 1976), the APL study was described as "a research study to identify and assess adult functional competency (literacy)." (p. 72) In the fourth edition of *Educational Programs That Work* (USOE, 1977), the JDRP approval number and date remained the same as in the third edition, but the description of the APL study had changed. The study was now a "competency-based system of education that combines diagnosis, prescription, teaching, evaluation and possible credentialling of life-coping skills." (p. 6-3)

plementation. States should plan to utilize section 309 and other funds in support of projects to conduct a statewide literacy assessment and to develop instructional programs designed to meet APL objectives. Also encouraged are staff development or special projects which focus on the translation of APL objectives into curriculum and teacher competencies. Careful attention should be paid to the avoidance of overlap and duplication in these developments. (*Federal Register*, April 23, 1975, p. 17960)*

Two points are noteworthy with regard to USOE's proclaiming this priority. First, it was issued long before the study's final report was completed. Second, this priority gave Federal sanction not only to the general notion of organizing adult education so as to meet the life and occupational needs of adults with low levels of formal schooling, but to one particular manifestation of this general notion; namely, the APL approach. USOE enthusiasm for promoting APL is clearly one factor that helps explain the impact of the APL study on adult education.

Perhaps one might view the APL project not as a scientific inquiry, but as a very effective exercise in marketing ideas for adult education. Indeed, given American passion for worldly success, the justification of the APL test items in terms of their mathematical association with indicators of success in life would appear to be a stroke of marketing genius.

The notion of basing the APL study findings on a nationwide statistical survey also greatly enhanced its potential for garnering public attention. As Daniel Boorstin, in *The Americans, The Democratic Experience* (1974), has written:

> The distinctive fact about statistics in the United States was not their rise as a learned specialty. One by-product of democracy was an unprecedented popular diffusion of statistics, and in the twentieth century a new kind of number consciousness captured the public mind.

The number consciousness of the public and the American passion for worldly success both help to explain why the remarkable conclusion of the APL study—that one fifth of U.S. adults are "functionally incompetent"—received such widespread attention. But neither of these factors fully explains the *impact* of APL on the world of adult education. After all, the Federal Government has been notably unsuccessful in marketing other of its enthusiasms. Instead, we think that the apparent impact of the APL study can be explained by considering the status of adult basic education programs in the United States.

The Adult Education Act of 1966 emphasized "adult basic education"—defined as "education for adults whose inability to speak, read or write the English language greatly impairs their ability to get or retain jobs commensurate with their real ability" (Comptroller General, 1975). One problem with fulfilling this mandate is the well-established fact that participation in adult education varies directly with adults' previous educational attainment. Patricia Cross (1978), for example, cites data showing that participation rates in adult educa-

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*Other stated priorities dealt with dissemination of improved programs and practices at the state level, the role of employees, staff development, and experimental and demonstration projects.

tion in 1975 ranged from 30 percent for adults with 5 or more years of college, to 12 percent for high school graduates, to only 2 percent for those with an elementary education or less (0 to 8 years of schooling). A 1975 review by the Comptroller General of the adult basic education program authorized by that legislation confirms this general condition.

> Only about one percent of the Adult Education program's estimated target population of 57 million adults (16 years of age or older and not enrolled in school who have not completed their secondary education) and four percent of the 15 million adults with less than eight years of school have participated in any given year.

As a result of this review, the Comptroller General recommended, among other things, that the U.S. Office of Education:

- emphasize recruiting and educating participants from the first priority group (adults functioning at the fourth grade level or below);
- develop a system to identify potential benefits of special projects and to insure maximum dissemination to, and adoption of their results by state and local management levels.

Given these recommendations and USOE's agreement with them (Comptroller General, 1975), it becomes easier to understand why the APL study was greeted enthusiastically at USOE and why that agency promoted the APL approach even before the study's final report was finished. The APL study not only supplied dramatic evidence of the need for adult basic education, but also provided a framework for organizing adult education activities to respond to the need.

In congressional hearings in 1976, Daniel Flood (D-Pa.), then chairperson of the House Appropriations Subcommittee on Labor and Health, Education, and Welfare, asked USOE officials what they planned to do to resolve deficiencies identified by the APL study. Paul Lalker, director of USOE's Division of Adult Education, explained:

> ...the basic purpose of the study was to define the educational fields of adults. And that study does, in the form of 65 objectives, identify the knowledges (sic) and skills which adults must have if they are going to function effectively.
>
> We met just last month with all of our state directors in Texas, with the (APL) project staff, in planning how the states will build curriculum and develop more effective systems based on this more accurate definition. The money which the Congress in 1974 authorized for experimental demonstration authority at 15%, does give the resources to the states to take the ball and run with it. (U.S. Congress, 1976, p. 440)

USOE not only provided financial resources to the states to take the APL ball and run with it—via the priority placed on APL with respect to the section 309 experimental and demonstration monies, which in 1976 amounted to around $10 million—but also provided more direct promotion of the APL. In 1977, for example, USOE sponsored regional workshops to introduce adult educators to the APL approach. Also, a number of adult educators met in Texas to develop curriculum materials to help implement the APL approach.

But it was not just USOE promotion that made the APL approach attractive to adult educators. The APL seemed to organize adult education activities so as to overcome obstacles to participation by less well-educated individuals. As Kjell Rubenson (1978) observed:

> ...available evidence suggests that the most powerful psychological impediment is the individual's belief that participation in adult education would not improve his general living situation or give him any advantages in the labor market. This attitude is often, especially among older people, linked to a fear of studying. One has learned that "education is not my cup of tea." In many cases, this is connected with a negative school experience.

In this light, it becomes easier still to appreciate the attractiveness of the APL to adult educators. APL encouraged adult education to adopt a form quite different from the three R's orientation of traditional schooling and to do so in a way that seemed to promise adult learners both improvements in their general living situation and advantages in the labor market. Not surprisingly, these aspects of the APL approach are stressed in APL curriculum materials. Much of the APL curriculum development work has been done by the staff of the Adult Performance Level Project of the University of Texas at Austin—the same group that conducted the APL study.* Curriculum materials developed by the APL group are now published by Harcourt Brace Jovanovich as "The APL Series" and subtitled "Coping in Today's Society."** The publisher's promotional material advises:

> Perhaps the most important thing to consider in judging the value of the APL Series is the *content*. Traditional skills like reading and computing are treated as the means to an end—rather than as ends in themselves. The life-coping information your adult learners will gain through these materials will serve them well long after they leave your classroom. (p. 7)

When one looks into the sample of the APL series content provided in the promotional booklet, one finds a range of practical information dealing with everything from family budgeting to job finding and health care. This information is organized into the same five knowledge areas as the APL test (consumer economics, occupational knowledge, health, community resources, and government and law). However, the curriculum materials seem to reflect some very different assumptions about the nature and stability of adult competence from those undergirding the original APL study and tests. In the health unit of the APL series, for example, one lesson asks what adult learners would do, as parents, if they learned that their son had been cutting classes regularly, or that their 14-year-old daughter had been masturbating.

The introduction to these "what would you do" situations advises that, "...there are no right or wrong answers. Everyone has to deal with a problem in his or her own way." This ad-

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*For an account of other efforts to develop curriculum materials appropriate to the APL approach, see Heller et al., 1978.

**These materials are divided into eight units: consumer economics I, II, and III; occupational knowledge; community resources; health I and II; and government and law. Each unit contains a reading book, student workbook, teaching manual, and teacher's kit, with the full set of materials for all eight units priced at around $200. (Harcourt Brace Jovanovich, 1979)

vice seems entirely sensible in light of the criticisms of the APL study and test. Indeed, this disclaimer seems entirely appropriate to a host of "adult competence" problems--including whether radicals and trouble-makers should have the right to peaceful assembly, what Mary Dilly should do to make quick money, and what Esther Maxey should do with her garbage—but flies in the face of the assumption implicit in the multiple-choice format of the APL test that there are uniform right and wrong answers to such problems.

The advice also brings us to what we see as the primary value of the APL approach to adult education. Simply put, the APL approach has helped diversify methods of organizing adult basic education. It need not be arranged entirely around the traditional three R's of schooling. Rather, it can be organized in terms of real experiences of adult learners.

This view seems to be substantiated by the opinions of several adult educators with whom we have talked about their experiences with APL materials. One said, for example, that the materials serve as a supplementary source in planning lessons for adult learners around their own concerns, but not as a primary one. Another recounted that the APL life-skills approach has proven useful, but that the APL curriculum, based on the 65 APL objectives, has not been totally adopted. In sum, among the small and completely unsystematic sample of adult educators with whom we talked, none had adopted either the APL test or the curriculum materials in their entirety. Instead they were using them with other educational materials to broaden the base that they drew on to meet the diverse needs of adult learners.

In sum, the rapid spread of the APL concept and the curriculum materials can be attributed to the convergence of a number of factors in the mid-1970's:

- Its acceptance by the Joint Dissemination Review Panel.
- USOE efforts to inform state adult education leaders of the results of the APL study and, via Federal funding, to encourage adoption of its objectives in adult basic education programs.
- The recognition that the APL approach offered an attractive alternative to traditional ABE programs, which reached only a small proportion of the eligible population.
- The development of curriculum materials that did not adhere to the assumptions of the original APL idea.
- The fact that adult educators could adapt APL to their own needs.

In these respects, the influence of the APL study seems to have been largely salutary. But these respects are largely contrary to the narrow conception of competence embodied in the APL test itself—in the original Texas version and, to an even greater extent, in the ACT instrument, which uses the multiple-choice format exclusively. So the APL enterprise seems to us to have prompted two different tendencies in adult basic education. On the one hand, it has helped to broaden conceptions of how adult basic education can be organized and has enriched the body of curriculum materials available to adult educators. But on the other hand, it has served to promote a questionably narrow approach to the assessment of adult competence.

Areas for Further Study

This APL story serves, we think, to raise some larger questions about both the recent enthusiasm for competency testing generally and the means by which educational ideas and innovations are communicated to and influence educational endeavors. In the marketplace of educational ideas, hyperbole seems to have a permanent place. If the end results of a social inquiry like the APL study are largely salutary—having produced some useful adult education curriculum materials and broadened conceptions of how adult education can be organized—the reader might wonder why we are so harsh in reviewing the scientific quality of that inquiry. To make our concern clear, let us once again cite Walter Lippman's words (Block and Dworkin, 1976), this time in paraphrase, about the possible abuse of intelligence tests.

Though some of the developments flowing from the APL study may appear excellent, it is of the first importance that educators realize exactly what such improvements signify. For mischief will follow if there is confusion about the meaning of these reforms. If, for example, the impression takes root that the APL tests "scientifically" measure adult competence, then it would be a thousand times better if all the APL instruments were abandoned without warning. It is not possible, we think—again paraphrasing Lippman—to imagine a more contemptible proceeding than to confront an adult with a set of multiple-choice items and, after a bit of monkeying around with them, proclaim that person functionally incompetent. It would not only be a contemptible thing to do, it would be a crazy thing to do, because there is nothing in these tests to warrant a judgment of this kind.

This leaves us with two sets of questions on the APL tests and curriculum materials and on adult basic education. It seems to us that far more should be learned about how the APL tests and materials are being used. Are the tests in fact being used to draw summary conclusions about an individual's overall competence? How do adult educators who use the tests and curriculum materials reconcile the apparent discrepancies between the tests' fixed specification of what constitutes adult competence and the curriculum materials' recognition of legitimate alternate ways of solving life-skills problems in particular?

We have not, in this brief review of the APL study and its progeny, been able to examine these questions in any depth. Nevertheless, we think that answers to them are of far more than merely academic interest. McClung, for example, has already raised important questions about APL test use. In an article questioning the potential use of competency testing for unfair discrimination, he points out that one Florida school district has used the APL test as a basis for awarding students with a "Certificate of Attendance" instead of a regular high school diploma—despite the fact that school officials would not guarantee that all the APL objectives would be taught in 12 years of schooling (McClung, 1977).

Beyond questions directed strictly at the APL study and its progeny lies another set of questions about the state of adult basic education in the United States. Indeed, we think these questions are far more important than those directed solely at the APL enterprise. For as we have tried to show in this brief paper, the public success of the APL endeavor seems not to be explained by the scientific quality of the APL study nor even by USOE boosterism of it. Rather, its success and proliferation seem to be explained more by the state of adult basic education in this country. In this respect, it seems vitally important to explore other metaphors around which adult basic education activities might be organized. How, for example, might vocational

training for adults be tied more closely with adult basic education programs? How does the APL approach to adult basic education relate to other forms of adult education?

Adult education programs aimed at adults' earning the General Educational Development (GED) degree, for example, tend to serve adults with more formal schooling (5 to 12 years) than those in adult basic education. The GED-oriented programs typically focus more on the three R's of traditional schooling than on life-skills. What is the relationship between these two approaches to adult education? To what extent, if any, are the "life-skills" approach in adult basic education (exemplified in the APL) and the "school-skills" approach in adult general education (exemplified in the GED) leading to a stratified system of adult education? How does the acquisition of skills in these programs—be they life- or school-oriented—relate to the credentialling role of adult education?

These are some of the questions that this review of the APL enterprise has raised in our minds. We realize that there will likely be no clear-cut answers to many of them. Attending to them is, nevertheless, of considerable importance. For if we do not, it may happen that the tendency in the APL enterprise toward an enlarging vision of what adult basic education can be for diverse types of adult learners may inadvertently be lost to the other tendency in that enterprise—a narrow, fixed conception of "adult competence" as the goal of adult basic education, and an equally narrow perspective on how such competence can be assessed.

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